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CHARLES J. BRAND, Chief

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MARKETING AND DISTRIBUTION OF WESTERN MUSKMELONS[1] IN 1915.

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INTRODUCTION.

During the season of 1914 the Department of Agriculture received a great many complaints from growers in the United States with reference to glutted markets and ruinous returns to all engaged in the muskmelon industry. The Office of Markets and Rural Organization responded to the calls for assistance by sending special investigators to certain melon-growing sections, for the purpose of making a study of marketing conditions, and the investigators of the office

[1] Although the term "cantaloupe" is in wide commercial use in the United States at the present time, particularly in the irrigated districts of the West, the name belongs to a distinct botanical variety of this species and is restricted to that variety in commercial use in countries outside of the United States. The term "muskmelon," therefore, is used in this bulletin in conformity with the language of Food Inspection Decision No. 166, issued by the Department of Agriculture March 29, 1916.

NOTE.—This bulletin is of interest to muskmelon growers in the West, shippers, dealers, transportation companies, and consumers, and to all engaged in the trade.

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located in the large markets were instructed to give particular attention to muskmelons. The results of these studies have been made public.[1]

These studies were continued in 1915 in connection with an experimental market news service which was conducted for strawberries, tomatoes, muskmelons, and peaches. An intensive study of the most important melon-producing districts of the United States was made, and, as growers in the irrigated districts of the West suffered especially from the disastrous markets of 1914, special attention was given to these regions. In addition to market reporters covering the large cities during the muskmelon season, field representatives were stationed in the Imperial Valley district of California, the Salt River Valley district of Arizona, and the Rocky Ford district of Colorado during the entire shipping season. In addition, the Moapa section of Nevada and the Turlock district of California were visited by one of the authors during the shipping season.

IMPERIAL VALLEY DISTRICT, CALIFORNIA.

HISTORY.

The Imperial Valley is the earliest and probably the most important muskmelon-growing district in the United States to-day. The growth in production since 1905 has been remarkable, the increase being very close to 1,600 per cent in the 10 years since that time. The following table shows the total shipments per year from 1905 to 1915:

TABLE 1.—*Total shipments of muskmelons from Imperial Valley, 1905–1915.*

	Carloads.		Carloads.		Carloads.
1905	297	1909	1,411	1913	3,502
1906	577	1910	1,621	1914	4,448
1907	644	1911	2,580	1915	4,722
1908	1,891	1912	2,887		

During the season of 1915, 8,156 acres were planted to muskmelons. A portion of this area was abandoned or did not produce a good crop. However, the average yield of 185 crates of marketable melons per acre, making a total for the section of 4,722 cars of 320 crates each, shows the ability of this valley to produce abundant crops of muskmelons. The early and prolonged shipping season, extending from May 25 to July 21 in 1915, gave the valley a very considerable advantage in disposing of the crop.

The melons produced are largely of the green-meated (also called white-meated) varieties, the Early Waters and Eden Gem predominating. A few "pink meats," or Burrell Gems, are grown, but do

[1] See Gail, A. D., Sherman, W. A., and Yeaw, F. L. "Cantaloupe marketing in the larger cities with car-lot supply, 1914." U. S. Dept. of Agriculture, Bul. 315, 1915; and More, C. T., and Branch, G. V. "The commercial grading, packing, and shipping of cantaloupes." U. S. Dept. of Agriculture, Farmers' Bul. 707, 1916.

not form an appreciable part of the total. The entire acreage is produced under irrigation and, in general, the growing is handled successfully according to the most approved methods. The acreages of the individual growers vary from 10 or 15 acres to 100 or more, and some firms grow several hundred acres. The expansion of markets, however, has not kept pace with the expansion of acreage.

MARKETING ARRANGEMENTS.

Contracts Between Growers and Distributors.

The most striking feature of the marketing arrangements in the Imperial Valley is the contract in vogue between the growers and certain individuals, firms, or corporations, acting as shippers or distributors, who contract to handle and sell muskmelons for the growers at a stipulated commission of 15 per cent.

The shippers or distributors generally consign the melons to their main offices or to their connections in the eastern markets. They guarantee to make certain advances of money to the growers, which consist, first, of an advance at the time the contract is signed, generally $10 per acre, and of further per-acre advances during the growing season at the discretion of the distributor and according to the needs of the grower. When active shipping commences, the distributor further makes a per-crate advance at the beginning of each week covering all crates shipped by the grower during the previous week. In 1915 this per-crate advance varied from 57 to 77 cents per "standard," "jumbo," or "pony" crate.[1] The distributor deducts from this per-crate advance a certain amount to cover the cost of crate material, which is furnished by him, and a varying amount to repay the per-acre loans made earlier in the year. A general season's average net return, equal to the amount advanced per crate, is usually guaranteed by the distributor.

During the season of 1915 there were 14 firms shipping muskmelons from the Imperial Valley who controlled acreages by contract as described, and several other large shippers who grew their own melons. Copies of contracts were secured from 11 of those who advanced money on crops. All of these advanced $10 per acre as an initial loan, and most of them made additional per-acre loans of $5 or more. The per-crate advances of the 11 averaged 66 cents on the standard, pony, and jumbo crates, and 22.4 cents on "flats."

Reasons for Contract System.

At first glance, a contract system binding the grower to sell through a certain distributor at 15 per cent commission may seem undesirable; but it is based on the grower's inability to finance the raising of his crops. The muskmelon industry is a highly specialized and risky

[1] For definitions of crate see Farmers' Bul. 707.

one, so that local banks which were interviewed in the muskmelon sections generally have been unwilling to make crop loans unless other security than the muskmelon crop itself was made the basis of the loan. Very few growers in the Imperial Valley are able to furnish the security which is required.

The distributor usually employs a trained man, who inquires carefully concerning the grower's affairs before closing any contracts and who keeps in close touch with all developments during the growing season. Further, the distributor's agent usually stipulates the variety and also supplies the seed to be used by the grower. He often advises with reference to methods of planting and growing, picking and packing, and furnishes the material necessary for harvesting operations. Because of his close touch with the situation, the precautions taken before making any loans, and the protection given such loans by careful marketing of the crop, the distributor is willing to furnish money to the grower when others do not consider it safe to do so. At present, therefore, there seems to be no satisfactory alternative for the contract system.

FORM OF CONTRACTS.

In general, all contracts between distributors and growers are similar. The following sample is made by using clauses from contracts of several distributors, and is typical in that it embodies all of the main points of the 1915 contracts:

AGREEMENT AND CONTRACT.

This contract and agreement, entered into this .... day of ....., 191.., by and between ....., of ....., hereinafter referred to as the GROWER, and ....., of ....., hereinafter referred to as the DISTRIBUTOR,

Witnesseth: That for a cash consideration mentioned in paragraph ten of this contract and agreement, the Grower hereby appoints the above-mentioned Distributor his exclusive selling and distributing agent for all cantaloupes grown, owned, or controlled by the Grower for the season of 1915, and agrees to pay the Distributor as compensation for his services, a commission of fifteen (15 per cent) per cent of the amount of the gross sales of all cantaloupes delivered to and accepted for shipment by the Distributor at the shipping shed at ....., California.

The Grower agrees to plant or have planted ..... acres of cantaloupes, from seed to be furnished or recommended by the Distributor, and to deliver to the Distributor at the above-mentioned shipping shed in a properly matured condition, all cantaloupes of merchantable quality, packed in standard crates, 12 x 12 x 23½ inches, containing forty-five (45) cantaloupes; or pony crates, 11 x 11 x 23½ inches, containing forty-five (45) or fifty-four (54) cantaloupes, and if, in the opinion of the Distributor the conditions warrant, flat crates, 4½ x 13½ x 23½ inches, containing twelve (12) cantaloupes, each and every crate to contain cantaloupes of uniform size and quality.

The Grower further agrees to use his best efforts to produce the best quality of cantaloupes, as early in the season as possible; to pick, pack, and handle the same in a strictly first-class manner, using proper care in every respect to prevent injury from any cause, and to deliver the said cantaloupes to the shipping shed in wagons

provided with proper springs to prevent bruising, the cantaloupes to be properly protected after picking from exposure to the direct rays of the sun.

The Distributor agrees to perform the following:

"First. To provide a shipping shed through which to load all cantaloupes accepted by the Distributor for shipment, for the use of which the Grower hereby agrees to pay the Distributor a shed fee of not to exceed one (1c.) cent per crate for every crate accepted and shipped by the Distributor, said shed fee to be deducted from the cash advance hereinafter provided for.

"Second. To provide and sell to the Grower cantaloupe seed of first quality at one dollar and twenty-five ($1.25) cents per pound. To furnish to the Grower the following supplies at prices named, to wit: Registered paper wraps bearing the ..... Brand trade-mark, at eighty (80c.) cents per thousand, and in consideration of this price it is hereby agreed by the Grower that he will not ship any cantaloupes wrapped in the above-mentioned paper wraps except through the above-mentioned Distributor; nails at five dollars ($5.00) per keg; standard, pony, and jumbo crates at sixteen (16c.) cents each, and flat crates at nine (9c.) cents each, complete, including registered label bearing the ..... Brand, for which no charge is made, and it is understood that this label is loaned to the Grower, and the Grower hereby agrees that crates bearing this label shall be used only for such shipments of cantaloupes as are made through the above-mentioned Distributor under this contract. It being expressly understood that the Distributor shall not be liable to the Grower for failure to furnish such crates or other material or supplies if prevented from doing so by strikes or other causes beyond the control of the Distributor.

"Third. In consideration of the above clause, the Grower hereby irrevocably agrees that the terms under which the above supplies are sold to him will not be violated at any time during the shipping season and that under no circumstances will any portion of said crop be shipped through any other agency than through the Distributor, and hereby agrees that in the event that he violates said terms, or permits others to violate said terms, and ships or permits to be shipped any cantaloupes comprising said crop through any other agency without the written consent of the Distributor, that the prices named herein for supplies and material of every kind are null and void, and that he accepts said material, seed, crates, wraps, nails, etc., at an advanced price of twenty-five per cent above the prices mentioned in this contract, and that his entire season's supply is to be charged to him at said advanced prices. The said increased amounts over and above prices mentioned in this contract are to be credited to the "Surplus account" of the Distributor and, at the ending of the season said amounts are to be prorated, in accordance with the actual number of the crates shipped by other growers shipping through the Distributor, and are to be paid on that basis to the growers who have not violated their contract and whose interests have been injured by the shipment of said cantaloupes through other agencies by said Grower.

"Fourth. To advance to the Grower ..... cents per crate for all standard, pony, and jumbo crates of cantaloupes and ..... cents per crate for all flat crates of cantaloupes delivered by the Grower and accepted by the Distributor for shipment (except as may herein be otherwise provided for or agreed upon) less the average cost of crates, paper wraps, and nails, namely, twenty (20c.) cents for full-size crates and ten (10c.) cents per crate for flat crates, for all crates, paper wraps, and nails delivered to the Grower. the Distributor reserving the privilege to withdraw the advance on all varieties of crates excepting Fancy Standard and Fancy Jumbo crates containing forty-five (45) cantaloupes each upon twenty-four (24) hours' notice to the Grower, such notice to be given to the Grower either in writing or by posting same at the shipping shed. In case of an oversupply of cantaloupes, where, in the opinion of the Distributor, the markets of the country are in danger of being overstocked, the Grower agrees upon one day's notice from the Distributor to reduce his deliveries to five

crates per acre per day of Fancy Standards or Fancy Jumbos, packed forty-five to the crate. Payment of advance to be made the Grower every Monday for all such advances due him for deliveries made during the previous week.

"Fifth. To furnish the necessary lumber to load and ventilate cars, also inspectors and laborers to inspect and load into the cars all accepted crates of cantaloupes at the expense of the Distributor.

"Sixth. The Distributor further agrees to guarantee freight and refrigeration charges on all cars of cantaloupes shipped by him for the account of the Grower, excepting in cases of strikes and lockouts, in which case the Grower agrees not to offer any cantaloupes for shipment if so requested by the Distributor.

"Seventh. The Distributor agrees to use his best efforts and endeavors in the marketing of said cantaloupes in order to secure the best possible results, and to create a pool including all shipments of cantaloupes made by the Distributor each two days and send the Grower a statement showing the average net result of such pools as soon as possible after the sale of said shipments and as soon as possible after the close of the season to make settlement with the Grower and pay the Grower all moneys due him from the sale of his shipments after deducting for all advances, seed, and material; it being understood that the net results realized from the sale of all crates of cantaloupes shipped during the entire season shall average not less than ..... cents per crate for the full-size crates and ..... cents for the flat crates.

"Eighth. The original account of sales covering the sale of every car shipped by the Distributor for the account of the Grower shall be open for the inspection of the Grower at any time within six months after the shipments of cars, and such account of sales shall show damages and claims placed against the railroads, if there are any claims for damages filed.

"Ninth. The Distributor agrees to file damage claims with the railroads over which the cantaloupes are transported for all just claims for damages which may occur to cantaloupes while in transit; and to make all possible effort to collect such damage claims, and as soon as possible after same are collected, to pay to the Grower the amount of his proportion of the claims collected, less fifteen (15 per cent) per cent, which may be retained by the Distributor, and less all legitimate costs incurred in collecting such claims.

"Tenth. The Distributor agrees to advance, as a loan to the Grower, ten ($10.00) dollars per acre for each acre of cantaloupes which the Grower agrees to plant and ship under this contract, and said ten dollars per acre loan shall be deducted by the Distributor out of the crate advances made to the Grower at the rate of ..... cents per crate for all crates shipped by the Grower until said ten dollars per acre loan has been paid to the Distributor. However, it is understood and agreed that the acreage and crate advance hereinbefore provided for shall not be made on cantaloupes that may be planted by the Grower on land upon which another crop has been planted during the same season.

"Eleventh. In consideration of the acreage advance and guaranteed crate advance agreed upon in this contract, paragraphs fourth and tenth, the Grower hereby irrevocably assigns to the Distributor for collection any interest of every character which he may have in any claim or claims against any transportation lines interested in the transporting of the cantaloupes accepted under this contract, and agrees to pay to the Distributor fifteen per cent on gross amounts so collected, also legitimate expenses incurred in making said collections, and by mutual agreement between the Grower and the Distributor, any moneys so collected due the Growers are to be prorated when finally collected among all Growers shipping through said Distributor, on the basis of the total crates shipped by each Grower during said season.

"It is further understood and agreed between the Distributor and the Grower that no cantaloupes shall be received from wagons which are not in line for unloading at the shipping point at ten o'clock p. m.

"It is further mutually agreed between the Distributor and the Grower that the inspector furnished by the Distributor shall make inspection of all the cantaloupes delivered for shipment by the Grower, and his decision on grade, quality, and pack shall be final and binding on both parties hereto.

"In witness whereof the parties hereto have hereunto set their hands and seals on the day and year first above written."

....

....

By ....

Witness:

....

UNFAVORABLE FEATURES OF PRESENT CONTRACTS.

A careful study of the foregoing typical contract shows that the pooling arrangements in general use possibly may work an injustice to the producer, because all types of packages are included in one pool. As the distributor is paid a commission on gross sales, it is to his advantage to handle as many muskmelons as possible during the season, provided his average net return does not fall below the amount of his guaranty. It may happen that although standards are selling at prices which are returning good margins over the guaranteed season average, ponies are selling at prices which result in actual loss to the producer. By averaging the two classes of packages, the distributor may be protected on his advance and may secure a larger commission by handling more cars than he would if ponies were not shipped. Meanwhile, the grower is receiving a smaller return than he would if he shipped only standards. This inequity could be overcome by maintaining separate pools for standards and ponies.

A further disadvantage of the contract system has been that in the past it has had a tendency to encourage the packing of muskmelons of poor quality. In other seasons the advances were higher than in 1915, sometimes being as high as 85 cents. This amount was in excess of the cost of production and guaranteed the grower a profit on every crate shipped. Under such conditions there has been an inclination to pack as many crates as possible, regardless of quality. Some growers have even gone to the extent of "facing" the crates by putting good melons on the outside and packing poor ones in the middle. Under such circumstances the growers have depended on their advances for profit instead of depending upon the production of high-class goods, which would bring good prices. The result has been to cause a deterioration in the average quality, which has injured the reputation of Imperial Valley muskmelons. The importance of cooperation between growers and distributors to obtain good quality can hardly be overestimated.

POSSIBILITIES OF COOPERATION.[1]

The contract advance system of marketing appears to be established firmly in the Imperial Valley because of the financial situation, but there still seems to be possibilities for cooperation among growers. This is particularly evident in the purchase of supplies. At present all seed used is furnished to the grower by the distributor at an average price of $1.25 per pound, and crate material is furnished at a cost of 20 cents per crate, including labels, nails, and paper wraps for melons. While these prices are by no means exorbitant, they do, nevertheless, include a satisfactory profit to the distributor, which might be retained by the grower. A growers' organization by making purchases of such material might effect desirable economies; but although the saving probably would be worth while, it would not be as large as might be expected at first glance, as large quantities of crate material must be carried over from year to year and must carry interest, insurance, storage, and shrinkage charges.

A growers' cooperative organization would be effective also in taking upon itself the verifying of the distributor's books at the end of each season. Good business principles alone demand that an effective check of all sales be made at least once a year. A standard form of account sales should be insisted upon. Each account sale should show the market in which the car was sold, the date it arrived, the date it was sold, and the various prices which the different packages brought. Occasionally cars are sold outright in a single sale. In such cases the name of the buyer should be indicated and the various prices per crate shown. Many eastern receivers acting as agents for western muskmelon distributors are lax in making a detailed account sales.

QUALITY.

Because of the heavy transportation charges involved the California muskmelon is distinctly a semiluxury in the large markets of this country. The only exception is in the markets of the Pacific coast, to which the freight rates are low, so that the melons can be delivered at a moderate price. The muskmelon is an article liked by many but necessary to none. Because of this fact quality is of prime importance. Inferior or tasteless melons are entirely unsatisfactory to the consumer, and the frequent purchasing of muskmelons of such quality will cause him to discontinue buying them. In some seasons the quality of the Imperial Valley melons has been unsatisfactory, due in part to the contract conditions already explained. Although the season of 1915 witnessed some improvement in the average grade shipped, greater improvement is desirable.

[1] See Nahstoll, G. A., and Kerr, W. H. "A system of accounting for cooperative fruit associations." U. S. Dept. of Agriculture, Bul. 225, 1915.

The necessity for good quality has been so widely recognized that in 1915 the State of California passed an act establishing a standard grade for muskmelons which must be adhered to in the future.

Comparisons of Returns on Muskmelons of Good and Poor Quality.

The 1915 season demonstrated beyond question the fact that only high-quality melons give profitable returns. The differences in the selling prices of various brands were very marked and consistent throughout the season, those of good market quality bringing uniformly good prices and those of poor quality the reverse. The average prices received from the sale of cars of four typical brands in four markets on three different days are compared below (Table 2). A and B contained brands of consistently good quality and sold for higher prices than C and D, which contained two poorer brands. The cars were sold side by side on the various markets, and no effort was made to select cars showing particularly good or bad sales, the individual cars having been picked at random.

Table 2.—*Average prices received per crate for muskmelons from the Imperial Valley in four markets on certain days.*

	New York.	Chicago.	Pittsburgh.	St. Louis.
June 19.				
Good quality:				
A	$2.40	$2.75	$2.50	$2.10
B	2.25 to 2.50	2.25 to 2.75	2.25 to 2.65	2.25
Poor quality:				
C	1.75	1.25	1.50	None sold.
D	None sold.	None sold.	1.70	None sold.
June 30.				
Good quality:				
A	2.50	2.75	2.50	2.25
B	2.50 to 2.75	2.00 to 2.30	2.15	2.00
Poor quality:				
C	None sold.	None sold.	None sold.	None sold.
D	1.90	1.65 to 1.75	1.75	1.75 to 2.00
July 10.				
Good quality:				
A	2.00	2.25	2.50	None sold.
B	2.25 to 2.50	2.00 to 2.25	None sold.	None sold.
Poor quality:				
C	1.25	1.50	None sold.	None sold.
D	2.05	None sold.	1.78	None sold.

The Ideal Market Melon of the Gem Type.

As a market term, the word "quality" has a broad meaning. A melon of good quality for market purposes must be not only of good flavor and texture, but also of the size and shape desired by the market, of good appearance, possess good carrying qualities, and be properly picked, packed, and handled. A comparison of the quality of any two brands is merely a comparison of the nearness to which they approach perfection.

Size.—The market desires a uniform melon, both as to size and shape. The 45-size standard cantaloupe is the most popular and

profitable, and if melons vary from this size they should run larger rather than smaller. A few jumbos can be marketed to advantage, although these generally do not average as high in price as standards. Figures covering the net returns of one large distributor for the entire season of 1915 indicate that the average net returns per crate for jumbos was 76 per cent of the price realized for standards. Probably this may be accepted as typical when a fairly heavy supply of jumbos is moving. There is no basis for comparison between ponies and standards, as pony shipments were discontinued on account of low prices after the first few weeks. It can be said, however, that ponies are seldom profitable after a few early shipments.

Netting.—In addition to uniformity in size and shape, a thick, heavy netting, entirely covering the melon, is desired. Ideally, this should be so thick and heavy and stand out so prominently that the ground color of the melon is hardly visible. Such netting is considered an indication of good carrying quality and is therefore preferred by dealers.

Cavity.—The muskmelon should be thick walled, with a small cavity, and the texture of the meat should be fine grained rather than coarse. The seed should be attached firmly to the wall of the cavity. Melons of this character have been observed to possess somewhat better carrying qualities than those with large cavities or coarse flesh. Early varieties are generally less satisfactory as to cavity than those maturing somewhat later.

Color of flesh.—During 1915 another factor in determining popularity was the coloring of the flesh. Green-meated muskmelons with a pink or salmon-colored lining were most in demand, because of their pleasing appearance when cut. A number of strains of melons with this pink lining were used, and the distributors securing the best results usually shipped such melons. Certain strains of pink-meated melons which were used in 1915 possessed most of the characteristics essential to high quality.

Flavor.—Flavor is the determining factor in quality. A muskmelon may arrive on the market in splendid condition and with fine appearance, but will not give satisfaction unless its flavor is good. In fact, all other desirable characteristics are of importance only as they are accepted as indications of fine flavor or table quality.

Varieties.—The various factors of quality which have been described are all more or less characteristic of specific varieties of melons. In 1915 three varieties of green-meated melons were widely used in the Imperial Valley, these being the Early Waters and various strains of the Eden Gem and Pollock. The Early Waters ripened early, and therefore some sold at the early high prices, but after it came into competition with other varieties it was at a disadvantage because of its poorer quality, the high percentage of ponies produced, and its

large cavity. The cavity of the Early Waters was so large as to have a decided effect on the average weight per crate. The figures shown in Table 3 were furnished by the official weighing bureau of the Southern Pacific Co., and represent the average weight per crate of the entire shipments of various distributors taken on the days indicated. While some of the differences in weights are due to the varying skill of different packers, the results taken as a whole indicate quite clearly that the Early Waters is not as solid or heavy a melon as the other varieties. Sales in the market show that it is regarded as decidedly inferior to other melons from this district.

TABLE 3.—*Average weight per crate of certain shipments of muskmelons from the Imperial Valley.*

Variety.	Dates.	Standard.	Pony.	Flats.
	1915.	*Pounds.*	*Pounds.*	*Pounds.*
All Eden Gems	June 8–15	69.00	60.70	28.45
Do	June 10			29.90
Mostly Eden Gems	June 7,10	66.20	59.00	26.65
All Eden Gems	June 8,15	66.00	57.30	
All Eden Gems and Pollock	June 7	66.00	57.95	25.5
All Eden Gems	June 7,8	65.64	57.26	27.8
Eden Gems and Early Waters	June 7,8	65.00	58.00	28.50
Mostly Early Waters	June 7	64.83	55.64	
Early Waters and Eden Gems	June 10,11	64.66	55.76	
Mostly Early Waters	June 7	64.47	57.8	25.00
Do	June 11	64.30	55.38	

Percentage of ponies.—Because of generally unprofitable returns from ponies, good marketing practice makes it desirable to reduce their number as much as possible. The proportion of ponies to standards depends on the fertility of the land, the care taken in growing, and the variety. The Early Waters produced a higher percentage of ponies than any other variety largely grown in 1915.

Because of conditions not entirely understood, the proportion of ponies in the entire crop of 1915 was excessive, amounting to 74.7 per cent of the total number of crates shipped, according to actual count made on June 3, 4, and 5. After this date many of the pony melons were not packed.

As every pony-sized melon lost is an economic waste, an excess should not be produced. That the proportion of ponies to standards can be controlled to some extent by the variety planted is indicated by the figures in Table 4, showing the percentage of ponies to standards shipped on certain days. Shippers A, B, and C were shipping only Eden Gem melons, while the others were shipping varying proportions of Early Waters. The Eden Gem produced at least 50 per cent or more of standards, while shipper K, who had a very large percentage of Early Waters, could secure only 13 per cent of standards.

TABLE 4.—*Percentages of ponies and standards shipped on certain days from the Imperial Valley.*

Shipper and date.	Standards.		Ponies.		Total number of crates.
	Number of crates.	Percentage.	Number of crates.	Percentage.	
Shipper A:					
June 2	134	46.4	155	53.6	289
June 3	417	59.7	281	40.3	698
June 4	1,051	57.1	787	42.8	1,838
Total	1,602	56.7	1,223	43.3	2,825
Shipper B:					
June 2	178	46.8	202	53.2	380
June 3	492	52.4	447	47.6	939
June 4	1,142	57.5	842	42.5	1,984
Total	1,812	54.8	1,491	45.2	3,303
Shipper C:					
June 2	216	42.0	301	58.0	517
June 3	432	48.0	470	52.0	902
June 4	858	43.0	1,138	57.0	1,996
Total	1,506	44.0	1,909	56.0	3,415
Shipper D:					
June 2	114	38.0	183	62.0	297
June 3	173	32.0	372	68.0	545
June 4	650	38.0	1,042	62.0	1,692
Total	937	37.0	1,597	63.0	2,534
Shipper E:					
June 2	188	31.8	405	68.2	593
June 3	368	26.3	1,032	73.7	1,400
June 4	454	27.2	1,218	72.8	1,672
Total	1,010	27.5	2,655	72.5	3,665
Shipper F:					
June 2	15	14.0	94	86.0	109
June 3	26	9.0	250	91.0	276
June 4	130	30.0	294	70.0	424
Total	171	21.0	638	79.0	809
Shipper G:					
June 2	10	12.0	76	88.0	86
June 3	18	12.0	132	88.0	150
June 4	50	25.0	150	75.0	200
Total	78	17.9	358	82.1	436
Shipper H:					
June 2	118	12.0	831	88.0	939
June 3	208	10.0	1,934	90.0	2,142
June 4	652	18.0	2,887	82.0	3,539
Total	978	14.7	5,652	85.3	6,620
Shipper J:					
June 2	218	15.4	1,200	84.6	1,418
June 3	343	13.1	2,259	86.9	2,602
June 4	802	18.0	4,579	82.0	5,381
Total	1,363	14.5	8,038	85.5	9,401
Shipper K:					
June 2	183	12.0	1,323	88.0	1,506
June 3	417	14.0	2,615	86.0	3,032
June 4	618	13.0	4,014	87.0	4,632
Total	1,218	13.2	7,952	86.8	9,170

Proper maturity.—The picking of the melons at the proper stage of maturity [1] is important in securing good eating quality. The necessity of allowing melons to mature properly can not be emphasized too strongly, as the shipping of green melons is probably the quickest way in which to ruin the demand in all markets. Distributors seem to recognize the importance of good eating quality more keenly than do the growers, and have tried to insist on the inspection of melons before shipment and the rejection of all immature stock. Shippers and growers must cooperate if the green melon is to be eliminated from the market.

Inspection.

Before the 1915 season it had been customary to make all inspections on a sorting platform before loading the crates into cars. It is very difficult, and often impossible, to make a thorough inspection after muskmelons are packed, especially if the melons are wrapped, as the majority are in the Imperial Valley.

During the 1915 season certain distributors established a field-inspection system, either as a substitute for or in addition to the platform inspection. Competent, experienced inspectors in the field, keeping a watch over and advising pickers as to the proper stage of maturity and keeping an oversight on packing, have been a great help in the production of better grades. Such field inspection can prevent the improper picking and packing of stock instead of merely rejecting such stock after it is packed, as is the custom with platform inspection.

Packing.

Imperial Valley growers can also improve their quality by providing proper packing facilities.[1] Many of the packing sheds are of the crudest sort, having rough wooden sorting bins, with no padding, into which melons are tossed, sometimes from a considerable distance. Padded or canvas-bottomed bins should be provided and melons should be placed in them carefully and not thrown.

Importance of Quick Handling.

In an extremely hot climate, like that of the Imperial Valley, where the daily maximum temperature usually exceeds 100° F., muskmelons ripen rapidly between the time they are picked and the time they are placed under ice. Undue delay in placing them under ice at the shipping point probably is the most frequent cause of soft and overripe melons on the market. The shorter the time between picking and actually placing the muskmelons under refrigeration, the more mature they may be allowed to become on the vine. Under

[1] See Farmers' Bulletin 707.

ideal conditions they should be in the car and under ice within a few hours after they are picked. In at least one case where this was attempted a decided improvement in quality on arrival at market was obtained.

Under ordinary conditions picking and packing are often done by the same individuals, who go into the fields and pick for several hours, and then go into the packing shed and pack. Meanwhile, the melons have been exposed to the heat. After they are packed they are again allowed to stand in the packing shed exposed to the warm winds until a full load is accumulated; often they are held until several loads are ready. Teamsters have been seen to deliver melons at the sorting sheds after midnight. The distance of melon fields from the railroad station is a factor which must not be overlooked when providing for efficient handling of the crop.

After muskmelons reach the loading shed the crates must be sorted into piles, according to grade and size, and usually a further delay occurs before they are loaded. Melons have been observed standing on loading sheds from a few hours to more than 10, and in one case for over 24 hours, part of the time in the direct rays of the sun. These delays must be eliminated or reduced if satisfactory quality is to be secured.

Effect of Contract Labor on Quality.

Most of the work of harvesting muskmelons in the Imperial Valley is contracted for by the firms or individuals who employ large gangs of men, brought to the valley for the harvesting season. Picking and packing is very seldom done by the grower himself, but is contracted for at an average rate of 20 cents per crate. Hauling from the packing to the loading sheds is let to teaming contractors at an average price of about 4½ cents per crate. Finally, the loading of the crates from the shed into the cars is not often done by the distributor himself, but is also done by contract. The contractor is interested chiefly in securing a good profit and is inclined to contract for more work than he can handle efficiently, and to try to economize on labor. The grower virtually loses control of the handling of his own goods, and is unable to expedite the work, even if he wishes to do so. The result has been delay at every step. It is not apparent that the grower or distributor is unable to handle his own business as economically as the contractor and certainly he can do so more efficiently.

A further bad feature of the contract system is that it encourages the picking of immature melons and a bad pack. The contractor being paid according to the number of packed crates, is interested primarily in packing as large a number as possible. When melons are not ripening rapidly enough to keep his entire crew busy, the contractor is losing money, and the result is a tendency to encourage

as close picking as possible, so that many melons are picked before being sufficiently mature. Likewise, there is an inclination to pack melons of doubtful quality in order to produce a large number of crates.

Quality of Wrapped and Unwrapped Muskmelons.

The question of the desirability of wrapped in contrast to unwrapped muskmelons is one which has been long discussed. In the season of 1915 many distributors in the Imperial Valley experimented with unwrapped melons, with generally unsatisfactory results. The unwrapped muskmelons in the majority of instances arrived on the market in an overripe condition. Reasons for this have not been established, the most plausible theory being that because of the very high temperature and warm winds the moisture in the melons evaporates very quickly after they are picked. Further, they change in temperature and ripen rapidly when deprived of the shade of the vines. It is believed that the paper wrap protects the melons not only from the hot winds but also somewhat from a rapid change in temperature between the time when they are packed and when placed in the car.

Whatever may be the reasons, it is certain that the distributors who wrapped their melons had fewer complaints of overripe stock than those who did not. One shipper decided not to wrap at the beginning of the season, but received so many complaints that in the middle of the season he decided to wrap all melons thereafter, and his complaints practically ceased. Market quotations everywhere indicated a preference for wrapped stock over the ordinary unwrapped. A few market quotations received are given below:

June 21, New York: Receipts, 23 cars. Stock mostly good condition, wrapped stock being given preference by the trade at higher prices than unwrapped.

June 24, St. Louis: Three cars arrived. Standards, unwrapped, $2; wrapped, $2.25.

June 29, Kansas City: Unwrapped standards, $1.50 to $1.75, mostly $1.50; wrapped, $1.75 to $2, mostly $1.75.

However, the question of wrapped or unwrapped muskmelons can not be dismissed without reference to one certain brand which was packed unwrapped the entire season with great success, usually topping the markets at prices well in advance of all others. This brand, however, was picked and packed with special care, and the melons were placed under ice promptly without the usual delays. This proves that under favorable conditions and with proper care muskmelons may be packed unwrapped and shipped to any market successfully.

The fact remains that under the average conditions in the Imperial Valley unwrapped melons did not prove a success in 1915, and probably will not until picking and packing methods have been more nearly perfected, and until the unnecessary delays between the field and iced car have been eliminated.

DISTRIBUTION.

The distribution of the western melon crop differs from that of most other crops, as it is handled almost entirely on consignment. This is due to its highly perishable nature, coupled with the long haul to market and the extremely rapid daily increase in the number of cars shipped after the season begins, all combining to make f. o. b. purchasing so risky that it is seldom attempted by eastern dealers.

The same factors which make it hazardous for the eastern buyer to purchase f. o. b. shipping point make it necessary for the shippers to exercise great care in distribution if disastrous returns are to be avoided. Quick handling of the goods is essential, as a delay of a few days or even one day en route may cause melons to be overripe. Likewise, if best results are to be obtained, it is desirable that refrigeration be continuous from the time that cars are shipped until they arrive at their final destination, and that car doors remain unopened during the entire time. For these reasons diversions and inspections en route should be avoided, and it is highly desirable that direct distribution be secured at the shipping point.

Not only should the distribution be direct, but it must be wide, as during the crest of the movement every possible outlet must be used if the grower is to receive an adequate return for his labor. Further, the distribution should be efficient; that is, markets should receive supplies in proportion to their consuming capacity.

The determination of the proper supply for various markets is difficult, as it does not vary directly as the population. Certain small markets take larger daily supplies at profitable prices than do other larger markets. For the purposes of discussion, profitable prices are assumed to be prices which will net the grower a return equal at least to his cost of production.

Cost of Production.

The exact cost of production per crate for Imperial Valley muskmelons is not a matter which can be determined with scientific accuracy, as it varies with the fertility of the land, the business ability of the grower, the rate of production per acre, and various other factors. Estimates of cost per crate made by different growers vary considerably. One of the largest individual growers and shippers figures his total cost at 60 cents per crate on board cars, while many others believe 80 cents about correct. Table 5 is believed to be a conservative estimate of the average cost per acre, being compiled after interviews with many growers of long experience. These figures are based on a labor cost of $2.25 per day per man. The value of horse labor is figured at 75 cents per day per single horse. Cultivation is figured at the rate of 4 acres per day.

TABLE 5.—*Average cost of production per acre of muskmelons in the Imperial Valley.*

	Low.	Average.	High.
Rent per acre	$10.00	$22.50	$40.00
Plowing per acre (hired)	.....	3.00	.....
Disking per acre	.....	.75	.....
Leveling per acre	.....	.50	.....
Seed (at $1.25 per pound)	1.90	2.00	2.25
Planting (2 acres per day)	.....	1.13	.....
Thinning and hoeing	.....	2.25	.....
Cultivating (4 times)	.....	3.00	.....
Training vines out of furrows	.....	1.00	.....
Watering (about 15 times) through season, at 50 cents per acre-foot	1.50	2.00	2.50
Total	.....	41.88	.....

Yields are variable. One shipper controlling 722 acres in 1913 reports an average yield of 167 crates per acre at one shipping station and of 222 crates at another. For 1914 the same shipper reports a grand average of but 126 crates per acre on 562½ acres. General opinion places 175 crates per acre as a good average yield, although this is somewhat lower than the 1915 yield, which was 185 crates per acre. On the basis of 175 crates per acre, the per-crate cost of production is 23.9 cents. Further costs are as follows:

TABLE 6.—*Total cost per crate on board cars of muskmelons from the Imperial Valley.*

Picking and packing (by contract)	$0.20
Crates, nails, and wrappers	.20
Hauling (average cost by contract)	.045
Shed fee	.01
Total	.455
Growing cost	.239
Cost on board cars	.694

The average grower, therefore, must receive a return of approximately 70 cents per crate before he is repaid for his labor.

CONSUMING CAPACITIES OF MARKETS.

As a guide to consuming capacities of the various markets at prices returning the grower his net cost of production, Table A (in envelope at end of bulletin) is presented, showing the daily receipts of Imperial Valley melons in all markets throughout the United States during the past season and the average returns from such markets, net to the grower, after commissions and charges are deducted. These figures cover returns on every car sold by 11 of the 16 large shippers, approximately 3,500 cars, or 75 per cent of the total shipments. Every car sold in every market is not included, and cars arriving in bad condition have been omitted, but there are a sufficiently large number to form a good basis for calculation.

In each case where it was available the average price for each sized crate in each car has been taken and the various brands on one

market in any one day have been averaged together, both the best and poorest brands being included in the average price thus obtained. In some cases only gross or net sales per car were available, and in such cases the returns have been prorated as follows:

The manifests have been reduced to a basis of standards, by figuring 3 flats or 1 jumbo equal to 1 standard, while 1 pony has been considered equal to 70 per cent of a standard. This basis of calculation for ponies was arrived at by taking the average quotations from Monday, June 14, to Saturday, June 26 (two weeks of market days), on New York, Chicago, Pittsburgh, Philadelphia, St. Louis, Minneapolis, and Los Angeles markets. In each city it was found that during this representative period ponies were quoted at approximately 70 per cent of the value of standards. The exact general average of all such quotations for the ponies was a value of 72.8 per cent of standards. However, 70 per cent has been selected as a convenient and approximately accurate value for ponies as compared with standards. After the number of packages recorded on the manifests had been reduced to the equivalent of standards the total number of standard crates so secured was divided into the net return of the entire car to obtain the average price for standards.

Under each date the column marked R represents receipts, or the number of cars arriving on the market on that date. The column marked P contains the average net price to the grower for the various sizes of crates. The sizes of the crates are designated by the letters S for standards, P for ponies, F for flats, and J for jumbos. In some cases an apparent discrepancy exists in the prices, as returns from ponies or flats will appear to be greater than the returns for standards. Such cases are due to a heavy supply of poor standards on the market, which pulled down the average price of standards, while all ponies or flats sold were of high quality.

In some cases diversions were made of which no records were secured, so that some prices were obtained at points where there were apparently no cars. With such a large movement and so many different factors it is impossible to secure absolute accuracy.

The column headed "Capacity" represents the capacity of each market to consume muskmelons at prices returning at least 70 cents per crate (the production cost as figured above) net to the grower expressed in terms of carloads per day (D) or per week (W). These figures are based on the returns of 1915.

The estimates of consuming capacity can not be considered absolutely correct, but are merely approximate. They are based on 1915 conditions, and can not be applied with exactness to any other year. Further, they can not be determined exclusively from returns. The quality of arrivals may be the cause of poor returns, and though a car may show a loss to the grower, this may not be due

to an oversupplied market, but to the unmerchantable quality of the goods. The figures presented are founded, first, on returns secured in 1915; second, on the quality of goods sold in each market; and, finally, on the opinion of dealers of long experience whose knowledge of conditions extends over many seasons. It is believed that these figures are the most nearly accurate which have been worked out. The estimates of consuming capacities of southern markets are based only on conditions prevailing in the early part of the season before local competition commenced.

It is possible that consuming capacities in succeeding years may be a trifle larger, as it must be remembered that during the Imperial Valley season in 1915 market conditions were not favorable to the consumption of muskmelons. The largest crop on record was moved in a season beginning nine days later than in 1914, when the next largest crop was moved. The weather in the eastern markets during this period was the coldest and rainiest known for many years. The only favorable feature was the unusually poor quality of the bulk of southern melons which came on the market in competition with Imperial Valley stock in July.

By referring to Table A it may be seen that receipts in most markets frequently have surpassed the estimated consuming capacity, and the result was necessarily a net loss to the grower. This may be avoided to some extent by efficient distribution, but there have been times each season when, due to extremely heavy shipments, practically all the available markets of the United States have been oversupplied.

The chart shown in figure 1 represents graphically the daily shipments of 1913, 1914, and 1915. The heavy line drawn across the page at 148 cars represents the estimated maximum daily *profitable* consuming capacity of the United States. When the movement exceeds this number of cars, growers should restrict their shipments or be prepared to stand a loss, since muskmelons can not be stored successfully. It will be seen that at various times in the past three years the total shipments have amounted to more than the total estimated consuming capacity of the entire United States.

It must not be imagined, however, that the estimates contained in this bulletin represent the ultimate consuming capacity of the individual markets in any case or of the United States as a whole. Much opportunity exists to broaden market outlets and to develop the consuming capacity of the markets now in use. Table 7 lists the total quantities of Imperial Valley melons consumed by the various markets in the United States in 1914 and 1915. A study of this table shows that some 20 new markets that had never before received carloads received direct shipments of muskmelons in the

past season, some of them receiving several cars. On the other hand, 40 markets which received straight cars in 1914 received none in 1915. During the 1915 season markets west of the Rockies as a rule largely

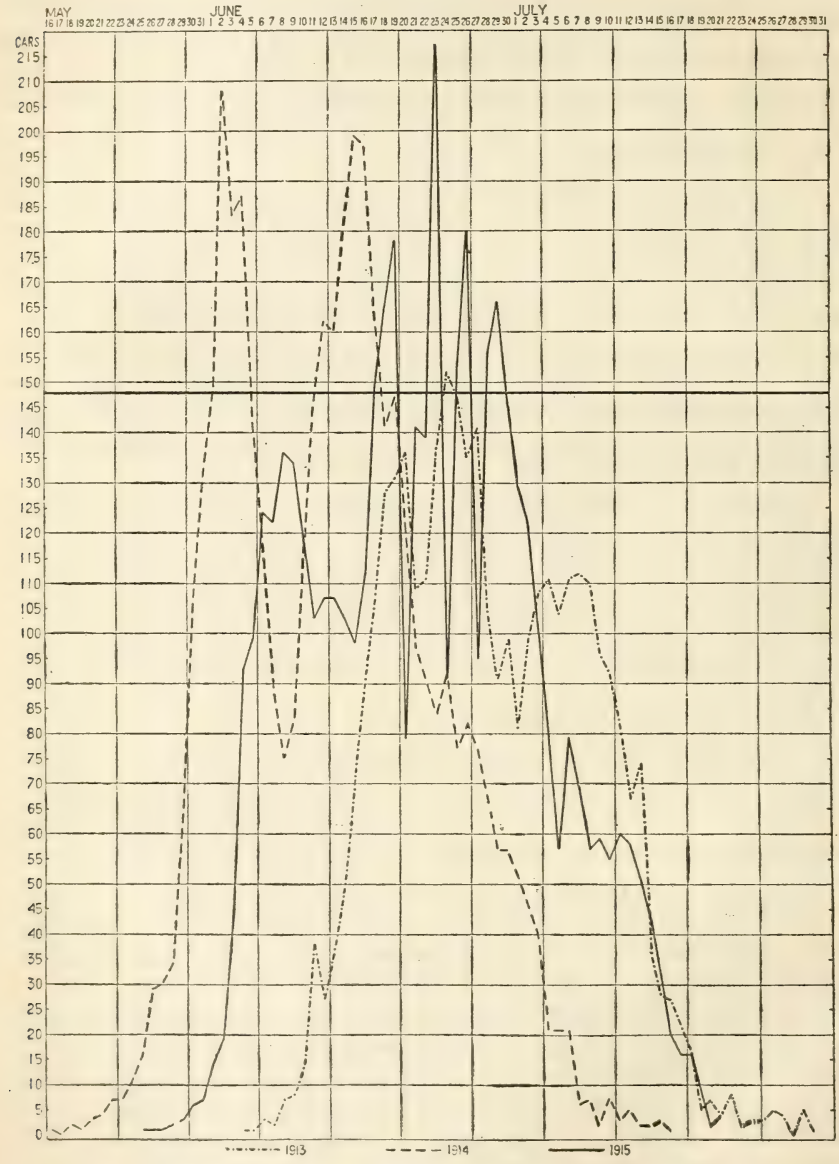

FIG. 1.—Chart showing the daily shipments of muskmelons, 1913, 1914, and 1915.

increased their consumption of Imperial Valley muskmelons, while many of the eastern markets decreased their consumption.

Unquestionably many towns which have not handled muskmelons by full carloads in the past could be developed to do so. Cities which

have been using steady supplies in the past years may be developed to consume larger quantities. That consumption does not depend entirely upon the size of the city is demonstrated by the fact that in 1915 Pittsburgh consumed 184 more cars of melons at as good average prices as Philadelphia, a city more than twice its size. A possible reason for this is the fact that for many years several of the most important muskmelon distributors in the United States have had their headquarters in Pitttburgh, and melons have been pushed vigorously on the market.

TABLE 7.—*Statement of destinations of muskmelon shipments from Imperial Valley.*

Destination.	Number of cars.		Destination.	Number of cars.	
	1914	1915		1914	1915
Aberdeen, S. Dak	2	0	Eugene, Oreg	0	4
Akron, Ohio	10	5	Evansville, Ind	11	8
Albany, N. Y	18	8	Everett, Wash	0	3
Albuquerque, N. Mex	5	8	Fargo, N. Dak	1	2
Altoona, Pa	18	9	Fern, Nebr	1	0
Amarillo, Tex	1	0	Flint, Mich	3	0
Ansonia, Conn	1	0	Fort Smith, Ark	2	0
Arkansas City, Kans	1	0	Fort Wayne, Ind	1	1
Bakersfield, Cal	1	3	Fort Worth, Tex	8	4
Baltimore, Md	34	42	Fremont, Nebr	0	1
Bay City, Mich	1	4	Fresno, Cal	5	14
Beaumont, Tex	3	2	Gallup, N. Mex	0	1
Bellingham, Wash	0	1	Grand Forks, N. Dak	4	6
Billings, Mont	4	5	Grand Island, Nebr	0	5
Binghamton, N. Y	2	0	Grand Rapids, Mich	12	4
Birmingham, Ala	5	3	Great Falls, Mont	4	5
Bismarck, N. Dak	1	0	Hannibal, Mo	1	0
Bloomington, Ill	1	1	Harrisburg, Pa	4	4
Boise, Idaho	0	2	Hartford, Conn	14	1
Boston, Mass	225	210	Hastings, Nebr	1	2
Bradford, Pa	1	0	Havre, Mont	0	1
Bridgeport, Conn	7	3	Helena, Mont	6	4
Buffalo, N. Y	59	79	Hornell, N. Y	0	1
Burlington, Iowa	7	9	Houston, Tex	8	5
Burr Oak, Iowa	0	1	Huntington, W. Va	1	0
Butler, Pa	1	0	Hutchinson, Kans	6	8
Butte, Mont	18	21	Independence, Kans	5	2
Calgary, Alberta, Canada	3	4	Indianapolis, Ind	39	30
Cambridge, Ohio	4	4	Ithaca, N. Y	1	0
Canton, Ohio	8	10	Johnstown, Pa	3	3
Cedar Rapids, Iowa	4	10	Joplin, Mo	12	9
Charleroi, Pa	1	0	Kalispell, Mont	0	1
Chicago, Ill	507	689	Kansas City, Mo	128	90
Cincinnati, Ohio	99	114	La Crosse, Wis	4	7
Clarksburg, W. Va	7	3	Lewiston, Idaho	0	2
Cleveland, Ohio	87	74	Lexington, Ky	2	1
Coffeyville, Kans	2	1	Lima, Ohio	5	1
Colton, Cal	11	7	Lincoln, Nebr	22	14
Colorado Springs, Colo	6	11	Little Rock, Ark	9	4
Columbus, Ohio	47	37	Long Beach, Cal	0	3
Crawford, Pa	0	4	Los Angeles, Cal	279	299
Cumberland, Md	5	5	Louisville, Ky	26	13
Dallas, Tex	15	10	Madison, Wis	3	0
Danville, Ill	1	0	Mansfield, Ohio	1	0
Davenport, Iowa	9	7	Mason City, Iowa	2	0
Dayton, Ohio	14	12	Massillon, Ohio	1	0
Decatur, Ill	1	0	McAlester, Okla	1	0
Denver, Colo	45	71	McKeesport, Pa	3	1
Des Moines, Iowa	19	28	Memphis, Tenn	22	20
Detroit, Mich	48	40	Miles City, Mont	0	1
Douglas, Ariz	0	4	Milwaukee, Wis	31	27
Dubois, Pa	6	2	Minneapolis, Minn	66	69
Dubuque, Iowa	1	3	Missoula, Mont	2	4
Duluth, Minn	9	6	Moberly, Mo	2	0
Easton, Pa	1	0	Montreal, Quebec, Canada	11	2
Elmira, N. Y	11	11	Muscatine, Iowa	0	2
El Paso, Tex	30	29	Muskogee, Okla	5	4
Erie, Pa	11	4	Nashville, Tenn	8	1

TABLE 7.—*Statement of destinations of muskmelon shipments from Imperial Valley*—Continued.

Destination.	Number of cars.		Destination.	Number of cars.	
	1914	1915		1914	1915
Newark, N. J.	6	12	Scranton, Pa.	11	8
New Castle, Pa.	3	3	Schenectady, N. Y.	1	0
New Haven, Conn.	9	0	Seattle, Wash.	79	91
New Orleans, La.	24	23	Sherman, Tex.	1	0
New York, N. Y.	571	639	Sharon, Pa.	1	0
North Adams, Mass.	2	4	Sioux City, Iowa.	13	18
Oakland, Cal.	30	55	Sioux Falls, S. Dak.	3	0
Ogden, Utah.	2	3	South Bend, Ind.	4	1
Oklahoma, Okla.	19	14	South Lincoln, Nebr.	1	0
Omaha, Nebr.	67	93	Spokane, Wash.	17	22
Ottumwa, Iowa.	2	5	Springfield, Ill.	6	9
Peoria, Ill.	18	14	Springfield, Mass.	6	12
Philadelphia, Pa.	243	207	Springfield, Mo.	2	1
Phoenix, Ariz.	4	8	Springfield, Ohio.	4	2
Pittsburg, Kans.	1	0	Stockton, Cal.	0	6
Pittsburgh, Pa.	344	391	Syracuse, N. Y.	15	6
Pittsfield, Mass.	2	4	Tacoma, Wash.	13	17
Pocatello, Idaho.	2	10	Terre Haute, Ind.	1	1
Portland, Oreg.	67	83	Toledo, Ohio.	21	10
Portland, Me.	4	3	Topeka, Kans.	31	21
Providence, R. I.	22	18	Toronto, Ontario, Canada.	12	12
Pueblo, Colo.	7	4	Tracy, Cal.	1	0
Regina, Saskatchewan, Canada.	1	1	Troy, N. Y.	9	2
Riverside, Cal.	0	2	Tucson, Ariz.	4	5
Rochester, N. Y.	4	3	Tulsa, Okla.	13	9
Rockford, Ill.	3	5	Turner, Iowa.	1	0
Rock Island, Ill.	0	1	Twin Falls, Idaho.	1	0
Rock Springs, Wyo.	1	0	Utica, N. Y.	7	10
Roseville, Cal.	0	3	Wallace, Idaho.	1	0
Sacramento, Cal.	29	44	Washington, D. C.	32	25
St. Joseph, Mo.	18	13	Waterloo, Iowa.	4	3
St. Louis, Mo.	156	122	Watertown, N. Y.	2	0
St. Paul, Minn.	9	12	Wheeling, W. Va.	14	9
Salina, Kans.	4	6	Wichita, Kans.	19	15
Salt Lake City, Utah.	16	20	Wilkes-Barre, Pa.	4	4
San Antonio, Tex.	3	3	Williamsport, Pa.	3	3
San Bernardino, Cal.	1	0	Winnipeg, Manitoba, Canada.	3	0
San Diego, Cal.	16	26	Worcester, Mass.	6	0
San Francisco, Cal.	136	210	Youngstown, Ohio.	10	8
San Jose, Cal.	13	18	Zanesville, Ohio.	5	2
Santa Barbara, Cal.	1	0			

Much has already been done in the way of developing markets, as is proven by the fact that in 1908 a crop of 1,891 cars was marketed at prices ruinous to all concerned, probably causing heavier losses than any other crop in the history of the industry, while now a crop of twice that size can be handled easily with profit. While the work of educating the public is tedious and often expensive, the broadened markets which result make it worth while.

SALT RIVER VALLEY DISTRICT, ARIZONA.

HISTORY.

The Salt River Valley district of Arizona begins to ship muskmelons at about the time when shipments from the Imperial Valley begin to decrease. In 1915 the first car was shipped from Mesa on July 4, and the last car was shipped from Glendale on August 1.

Muskmelons have been grown commercially since 1908, but shipments have not increased appreciably since 1911, as is shown by the following record of total output.

TABLE 8.—*Total shipments of muskmelons from Salt River Valley district, 1908–1915.*

Year.	Mesa.	Glendale.	Total.	Year.	Mesa.	Glendale.	Total.
	Cars.	*Cars.*	*Cars.*		*Cars.*	*Cars.*	*Cars.*
1908	276	56	332	1912	161	223	384
1909	161	121	282	1913	113	220	333
1910	66	49	115	1914	342	163	505
1911	472	240	712	1915	320	145	465

Growers generally do not specialize in the production of melons, but grow only a few acres, as part of a scheme of diversified farming. The muskmelon fields are usually much smaller than in the Imperial Valley, varying from 2 to 40 acres, there being only one field of "pink meats" as large as 75 acres in 1915. The average patch in the Salt River Valley is under 10 acres. This is forcibly illustrated by the fact that the largest distributor, who shipped about 200 cars, had contracts with over 80 growers.

The varieties grown include both the green-meated melon (principally the Eden Gem) and the pink-meated or Burrell Gem, the acreage being about evenly divided between the two. The growers surrounding Glendale specialize in "pink meats."

MARKETING ARRANGEMENTS.

Marketing arrangements are much the same as in the Imperial Valley, the grower entering into a contract with a distributor to market all of his muskmelons through the distributor at a commission of 15 per cent.

The contracts differ from those in the Imperial Valley in only a few particulars, the general language being much the same. For instance, advances are made on a basis of a certain amount per crate, plus the crate material, which is technically furnished by the distributor as an added item, the cost being afterwards deducted from the returns. This difference is one of form rather than of substance. In 1915 the advance on green-meated melons ranged from 25 to 50 cents per standard crate, from 15 to 30 cents per pony crate, and from 30 to 40 cents per jumbo crate, the average being 35 cents for standards, 22½ cents for ponies, and 35 cents for jumbos, the crate being furnished in addition. The advances on pink-meated muskmelons ranged from 12 to 15 cents per flat crate, depending on the size and pack of the melons. In addition to the per-crate advance, a $10 per-acre loan usually is made to growers, payable in two or

three installments during the growing season, the first loan of $5 generally being made either about the 1st of April, or when the melon fields show 80 per cent of a perfect stand. The per-crate advance is generally considered to be a guaranteed season average net return.

Two other special features of the contracts are a clause contained in some of them binding distributors to wire net results obtained from each car as soon as it is sold; and another allowing the distributor to discontinue the advances at any time by giving the grower 24 hours' notice. Neither of these provisions is contained in the contracts made in the Imperial Valley.

POSSIBILITIES OF COOPERATION.

Although the growers in the Salt River Valley have been organized in the past, there was no association in active operation in 1915. The opportunities for saving on purchases of materials and supplies through cooperation are much the same as those which exist in the Imperial Valley. Crates and nails for green-meated muskmelons are furnished to growers by distributors at 15 cents for standards, no paper wraps for melons being included. A charge of 10 cents is made for each flat. This price, however, includes the paper wraps for the "pink-meat" melons. Figures obtained indicate that this represents a gross profit of about 3 cents on standard crates and approximately 2 cents per crate on flats. However, from this gross profit there must be deducted the cost of labels and labeling, the shrinkage, breakage, insurance, storage, and interest charges.

Seed which is now furnished to the growers at $1.25 per pound could be purchased by an association in large lots at prices from 30 to 40 cents less than this. It is probable that a saving amounting to considerable in the aggregate could be obtained by cooperative purchasing.

QUALITY.

Picking and Packing.

The problems of securing quality are much the same as in the Imperial Valley, except that conditions are more favorable. Because of small acreages a great many growers are able to do their own picking and packing, with a consequent improvement in the average quality.

Packing is carried on in open sheds much like those in the Imperial Valley. Wrappers are used only for the Burrell Gem melons, and then only for the sake of appearance. While packing is generally fairly satisfactory, room for improvement exists, as is shown by the difference in weights in the following table of tests (Table 9), taken on the same day, covering different brands but the same varieties of melons. These weight tests are the average of an entire day's shipments.

TABLE 9.—*Average weight tests of different varieties of muskmelons from the Salt River Valley, Arizona, on one day.*

Brand.	Green meats.				Pink meats.		
	Standard.	Pony.	Two-thirds jumbo.	Jumbo flat.	Jumbo flat.	Standard flat.	Pony flat.
	Pounds.	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*	*Pounds.*
A	68			28.1	26.9		
B	69.3						
C			53.5				
D	69.5	58.3		27.2			
E	70.3		54.1		27.4	27.2	26.2
F			56.1			31.1	25.1

EFFECTS OF CONTRACT LABOR.

Some of the work of harvesting is done by contract, as in the Imperial Valley, the charges for picking and packing being 8 to 10 cents for flats and as high as 22 cents for standards. Where work was done by contract there were often complaints and there were some rejections on account of poor quality. An example of losses incurred on account of contract work was observed at the end of the shipping season when a contractor, who was anxious to complete his job and discharge his crew, entirely stripped a field of muskmelons, picking them so green that 600 crates were rejected by the shipper on account of immaturity and were practically a total loss to the grower. Instances of this kind did not occur where the grower did his own work.

QUICK HANDLING.

The hauling of the muskmelons is done almost entirely by the growers themselves. Because of warm weather there exists the same necessity for quick handling as in the Imperial Valley. In a field of melons under observation the inspector was seen to criticize the picking early in the morning, on account of the slightly green condition of the melons. The packing was delayed and the melons were allowed to remain exposed to the heat the entire day, not being hauled to the loading shed until late in the evening, when a number of melons were overripe from undue exposure to heat. Hauling must be done promptly if good quality is to be obtained.

INSPECTION.

Growers are unable to depend upon inspectors to any great extent to guide them in securing proper quality, for as a result of small and scattered acreages a constant field inspection can not be maintained by the distributors. Platform inspectors generally visit various fields

for a few moments each morning and spend the rest of the day on the loading platform, inspecting melons as they are brought in by the ranchers. This system seems to work satisfactorily under Arizona conditions.

Percentage of Ponies.

Because of proper selection of varieties and favorable climatic conditions in 1915, the percentage of ponies was very small as compared with the Imperial Valley. It is very doubtful if quality could be improved in this respect, as the losses from excessive production of pony melons were very small. The fact that the per acre yield is somewhat less than in the Imperial Valley may be an influencing factor in the production of a smaller percentage of ponies. Records of shipments taken from July 6 to 9 are as follows:

Table 10.—*Percentages of ponies and other melons shipped from the Salt River Valley.*

Shipper.	Green meats.					Pink meats.			
	Ponies.	Jumbos.	Standards.	Two-thirds jumbos.	Jumbo flats.	Pony flats.	Jumbo flats.	Standard flat 12's.	Standard flat 15's.
	Per ct.	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*	*Per ct.*
A	7.0	30.3	38.5	11.0	14.2	13.3	15.1	52.0	19.6
B	16.4	.....	83.6	.....	.....	6.7	.....	50.0	4.3
C	7.7	.....	41.7	.....	50.6	11.9	.....	88.1	.....

DISTRIBUTION.

Returns to Growers.

Distribution problems in all western melon sections are practically the same. Results in Arizona in 1915 were especially favorable, because of the almost total failure of the Indiana crop and the generally poor quality of melons from eastern sections which usually compete with Arizona. Pools of season averages, published by two distributors, show, in Table 11, the returns to Salt River Valley growers in 1915.

Table 11.—*Average returns per crate to two Salt River Valley growers during 1915 season.*

	Green meats.			Pink meats.	
	Shipper A.	Shipper B.[1]		Shipper A.	Shipper B.[1]
Two-thirds jumbos	$0.80	$0.667	Standard flat 12's	$0.364	$0.385
Standard	1.107	1.00	Standard flat 15's	.....	.30
Jumbo flats	.365	.....	Pony flats	.....	.195
Ponies	.683	.58	Jumbo flats	.....	.41
			Ponies (45's and 54's)	.714	.....

[1] Approximate.

Cost of Growing.

The actual records of growing costs taken from a large field of "pink-meat" melons at Glendale are as follows:

Table 12.—*Cost of production per acre of muskmelons at Glendale, Salt River Valley.*

Land rent	$10.00	Cleaning ditches	$0.20
Plowing	2.50	Picking crates used in field	1.00
Disking and harrowing	3.00	Picking and packing, 400 flat crates per acre, at 9 cents	36.00
Furrowing	.75	Hauling melons from field to shed	4.00
Seed	1.50	Hauling 400 flat crates from shed to town, at 1 cent	4.00
Hoeing	3.60		
Cultivating	2.00	Total	72.10
Turning vines	.65		
Labor of irrigating	1.90		
Irrigation water	1.00		

As this field produced 400 flat crates of "pink meats" to the acre, the total cost was 18 cents per crate, to which must be added 10 cents for crates, nails, and wrappers, making the cost on board cars 28 cents.

In the Mesa district, where most of the green-meated muskmelons are grown, an estimate of costs was obtained from the grower of a large field of Eden Gems. The figures are based on a labor cost of $2.50 a day per man and 75 cents a day per horse. The cultivation is based on the rate of 4 acres a day per man with a single horse. The following figures cover a typical melon field and are believed to represent the average, although it is known that costs in other fields may vary considerably from this:

Table 13.—*Cost of production per acre of muskmelons from Mesa district, Salt River Valley.*

Rent	$15.00	Cultivating 4 times	$3.25
Plowing, first time	3.00	Training vines	1.25
Plowing, second time	3.00	Water about 10 times, at 50 cents per acre-foot	1.25
Harrowing, disking, and leveling	3.00		
Seed, at $1.25 per pound	1.00	Total	33.50
Planting 5 acres per day	.50		
Thinning and hoeing	2.25		

Estimates of normal production in the Mesa district seem to agree that 150 crates per acre is a fair average. On this basis the growing cost of the above field was 22.3 cents per crate. The total cost per crate on board cars was, therefore, as follows:

Table 14.—*Total cost per crate on board cars of muskmelons from the Mesa district, Salt River Valley.*

Growing cost	$0.223
Picking and packing (by contract)	.22
Hauling	.03
Shed fee	.01
Crate material	.15
Total	.633

DISTRIBUTION IN 1915.

Table B (in envelope at end of bulletin) has been prepared to show the actual results obtained in the various markets at different times during the 1915 season, in order that it may be used as a partial guide in the future. However, the figures shown in this table can not be relied upon entirely, as competitive shipments from other points will greatly influence the results obtained. Because of a crop of poor quality in the East in 1915, the competition received by Arizona melons was below normal. Further, in calculating the results which may be obtained in any market, the competition from other western sections, such as the Imperial Valley and the Moapa and the Turlock districts, must be considered very seriously. Therefore, no attempt has been made to draw up any definite table of the consuming capacity of various markets for Arizona melons, as there are too many factors which vary from year to year. However, a careful study of the net returns secured by the grower in 1915 (cost of package not deducted) should be a valuable aid in the selection of markets in the future.

MOAPA DISTRICT, NEVADA.

HISTORY.

Commercial muskmelon growing in Nevada is confined to the Moapa Valley, this being a narrow valley extending from Moapa, on the main line of the San Pedro, Los Angeles & Salt Lake Railroad, southeastward for about 20 miles, which is served by a branch line of the railroad. The district is an old one, having been shipping yearly since 1906. The industry has not developed rapidly, as the acreage necessarily is limited by scarcity of water, the entire valley depending on warm springs for its irrigation water. However, the acreage planted has increased slightly nearly every year. In 1910 there was a decrease, due to unsatisfactory returns the year before. Yearly shipments since 1906 are shown in Table 15.

TABLE 15.—*Total shipments of muskmelons from Moapa district, Nevada, 1906–1915.*

	Cars.		Cars.
1906	21	1911	97
1907	15	1912	119
1908	56	1913	159
1909	165	1914	299
1910	75	1915	276

The beginning of the shipping season follows very closely upon that of Arizona, extending from July 7 to August 4 in 1915. The acreages are generally not large, the crop being handled rather as a side issue. Except for a small number of Indians residing on a neighboring reservation, no labor except that of the resident ranchers

is available during the rush of harvesting, and the harvesting work and packing must be done largely by local help. The green-meated varieties are grown exclusively.

MARKETING ARRANGEMENTS.

For a number of years marketing has been handled almost exclusively by one firm of distributors at a commission varying according to the sections of the United States in which the cars have been sold, 17½ per cent being charged in the territory north of Denver and Salt Lake and west of Minneapolis, and 15 per cent in the remainder of the country. No information is available regarding advances.

QUALITY.

All melons are shipped unwrapped. The quality and pack has generally been fairly satisfactory, although it could be improved by methods suggested for other sections.

DISTRIBUTION.

For many years Moapa Valley muskmelons have been marketed almost exclusively in western cities, only a few cars going to eastern points. As a result of the scarcity of good muskmelons in the eastern section in 1915 a larger number of cars than usual were shipped east. Table C (in envelope at end of bulletin), showing the receipts of western muskmelons on the markets during the Nevada season and the prices obtained for Nevada melons on the various markets, illustrates the success met with in the different cities.

The results obtained in 1915 were good, and certain of the smaller western markets were used to very good advantage. It is probable that the distribution could be broadened if necessary to provide for increased acreage. The only obstacle in the way of going farther afield for markets is the fact that in the past the growers in the Moapa Valley have been accustomed to picking their melons for delivery in the near-by western markets; consequently it is not unlikely that most of the melons may be a trifle too soft for shipment to distant points. In fact, some complaints to this effect have been heard in the markets, but such objections could be easily overcome.

TURLOCK DISTRICT, CALIFORNIA.

HISTORY.

The Turlock district is located in the San Joaquin Valley in the vicinity of Turlock, Cal., which is the principal shipping station, a majority of the cars being shipped from this point. The area of the district is not large, and the growers are resident ranchers exclusively, very little or no land being rented for the purpose of growing muskmelons. The patches generally are not large, and are cared for by the owners as part of a plan of diversified farming. The varieties grown

are very largely the green-meated, especially various strains of the Eden Gem and Pollock. Only a small acreage of Burrell Gems is grown. The district is notable in that it is the only western muskmelon section not depending upon surface irrigation. Although the San Joaquin Valley is supplied with water for irrigaiton, and alfalfa and grain fields are irrigated freely, the growers depend entirely upon subirrigation or seepage to supply the necessary moisture.

The muskmelon crop was not generally very profitable prior to 1915. Shipments were limited by unsatisfactory market conditions in previous years, and only a portion of the crop was moved. In 1915 the markets were good, and shipments continued for a long season, car lots going out from July 20 until October 4. The following figures show the difference between shipments in 1914 and 1915:

To—	1914	1915
	Cars.	*Cars.*
East	539	1,350
West	120	204
Total	659	1,554

So far as could be learned, the acreage was substantially the same in both years, and the production about the same. Had the market been as satisfactory in 1914 as in 1915, it is not improbable that the same number of cars could have been moved. In other words, it seems probable that half of the crop of 1914 was lost for lack of markets.

MARKETING ARRANGEMENTS.

Muskmelons probably have been marketed in a greater variety of ways at Turlock than in any other western sections. In previous years large numbers were purchased from the farmers' wagons by buyers stationed in the railroad yards, but this was not so much the case in 1915. Fairly large acreages were contracted to distributors to be marketed at a charge of 15 cents per crate. So far as is known, there were no advances made in any of these contracts. A cooperative organization was formed, which handled a considerable tonnage for 15 cents per crate. After a 5 per cent dividend was paid on the stock, any surplus was to be returned to the growers at the end of the season, being prorated on the basis of the volume of shipments offered by each grower.

QUALITY.

The quality of Turlock muskmelons during the 1915 season was generally satisfactory, although not uniform. The prices at which different brands sold on the market varied considerably. Certain brands also were very uneven, some very good packs and some very poor being observed in the same cars. No wraps were used on any of the Turlock melons.

DISTRIBUTION.

The question of distribution is fully as important in Turlock as elsewhere. The 1915 season was the first in which muskmelons from this region were shipped successfully to eastern markets in any considerable quantities. Because of the scarcity of good melons in the East at precisely the time when Turlock was shipping, and because of the lateness of the Rocky Ford season and the poor quality shipped therefrom, the Turlock district practically had the market to itself so far as muskmelons of high quality were concerned.

As a result of these conditions, the returns were remarkably good and the season very successful. However, it remains an open question whether Turlock melons can invade the eastern markets and pay a profit to the growers in normal seasons, when a fair quantity of good local melons are available.

Table D (in envelope at end of bulletin) has been prepared to show the net returns received by the growers on the different markets of the United States from day to day. This table covers practically the entire shipments of the season and contains figures covering approximately 1,400 cars of the total number of 1,554 cars. The only information available in each case was the net return to the shipper and the manifest of the individual cars. The manifests of the cars were reduced to a basis of standards by considering ponies equal in value to 70 per cent of a standard and by considering flats equal to 33⅓ per cent of a standard. The total standards secured by such a method were divided into the net amount received by the distributor, and this is taken as a net return per standard. In each case the distributor's or association's selling charge must be deducted from the figures quoted in order to secure the net amount to the grower. Since selling charges vary, distributors' commissions have not been deducted. The figures quoted in each instance are averages; that is, the various brands appearing on one market for any one day were averaged together.

This table is presented merely as a basis of comparison between various cities and as a record of the season's results. It should not be accepted as an assurance of what may be expected in other seasons with the same volume of shipments, as conditions in competitive areas were not normal in 1915. The next season may show entirely different results, but the chart may be used as an index of the comparative success with which different markets were used in 1915.

COLORADO DISTRICT.

HISTORY.

The Arkansas Valley district of Colorado is the oldest, and for many years was the heaviest, western muskmelon-producing area in the United States. It is divided into two distinct sections, the

Rocky Ford district, located along the line of the Santa Fe Railroad, which raises about 80 per cent green-meated muskmelons and 20 per cent pink-meated; and the Ordway district, which is about 15 miles north and northwest of the Rocky Ford district, located along the line of the Missouri Pacific Railroad and devoted exclusively to the pink-meated Burrell Gem variety. Some stations as far as 60 to 80 miles east of Rocky Ford also ship a number of cars of muskmelons, and these points are usually considered a part of the Rocky Ford district, although they are separated by a stretch of country in which no melons are grown. The production in Colorado has increased somewhat of late years, but by no means in the same proportions as in the Imperial Valley. The decided decrease in production in 1915 may be attributed to a short crop, due to late spring frost and a backward season. The following is a table of shipments for several years.

TABLE 16.—*Total shipments of muskmelons from Colorado district, 1908–1915.*

	Rocky Ford district.	Ordway district.[1]		Rocky Ford district.	Ordway district.[1]
	Cars.	*Cars.*		*Cars.*	*Cars.*
1908	615	.....	1912	1,132	.....
1909	1,129	.....	1913	1,695	.....
1910	1,324	.....	1914	1,732	942
1911	1,235	.....	1915	789	228

[1] No figures available until 1914.

The Colorado shipping season is the latest of any of the highly important regions, extending from August 30 to October 13 in 1915, but this was abnormally late.

The acreages of individual growers are generally small, varying from 2 to 20 acres, with only a few patches which are larger. The muskmelon crop is one of a number of important crops, but few growers specialize in it. The crop is marketed almost entirely under contract between growers and distributors, although there is some cash buying by distributors and commission men on the ground during the season, which amounts to a small proportion of the total shipments. The terms of contracts differ in the two districts.

MARKETING ARRANGEMENTS.

ROCKY FORD CONTRACTS.

In the Rocky Ford section there are two distinct classes of growers—the tenant-farmer growers and the landowner growers. The former are generally unable or unwilling to finance the growing of their crops, and their marketing arrangements are usually based on a guaranteed-advance-per-crate type of contract. Under such contracts in 1915 the advances were generally 50 to 55 cents per standard

crate, 25 cents per flat crate, and in some cases 25 cents per pony crate, though the larger number of the distributors refused to make any advance whatever on pony melons. Under such contracts the crate material usually is furnished to the grower by the distributor at cost or at a price allowing the distributor a small margin of profit. Pools are made biseasonally—one for the shipments made in August and the second for all shipments from September 1 to the end of the season. The distributor reserves the privilege of discontinuing all advances upon 24 hours' written notice. The commission on the advance, as well as the no-advance types of contracts, is 15 per cent.

During the past year most of the owner growers adopted a contract which contemplated no advance payment per crate by the distributor. These owner growers generally do not need financial assistance in producing their crops. Under this contract as written the distributor performs no service but loading the cars and marketing them. These growers purchase their own material either individually or through their association. A feature of one such contract was that returns were made to the association without delay by the local agent of the distributing company on the same day that the car was sold in the eastern market, the result being telegraphed by his eastern connection. Further, copies of all account sales were mailed directly to the growers' association by the eastern agent of the distributor, these acting as a check on the wired amount.

It should not be inferred that no owner growers have contracts including advances or that all tenant growers have contracts with advances. No hard-and-fast rule can be set regarding contracts of the Rocky Ford district, but in a general way the various classes of growers in 1915 made contracts as indicated. A copy of a "no-advance" type of contract is given below:

AGREEMENT AND CONTRACT.

This agreement made and entered into this 15th day of March, 1915, by and between ....., party of the first part, and ...., party of the second part.

Witnesseth: That,

Whereas party of the first part is at all times engaged in shipping, marketing, and distributing cantaloupes on commission; and

Whereas party of the second part is engaged in the growing of cantaloupes;

This agreement is such that the party of the second part agrees to plant 140 acres of cantaloupes, eighty (80) per cent Eden Gem variety and twenty (20) per cent Osage Gem variety, and properly prepare the ground, plant, cultivate, grade, and pack cantaloupes, making every effort to secure best quality of product, and deliver same to the said party of the first part in good merchantable condition, at the platforms: ..... for inspection, the inspectors to be furnished by the said party of the first part.

It is further agreed that for and in consideration of the party of the second part growing and delivering said cantaloupes, as aforesaid, the party of the first part shall

receive same at loading stations at ....., advance all freight, refrigeration, and cartage charges on said cantaloupes to and at their destination, and deduct the same from gross sales, as herein provided.

The party of the first part further agrees to note on all account sales, as far as practicable, the shippers numbers on all such crates that are not up to grade.

It is further agreed that the party of the first part shall furnish all lumber and labor for loading cars at its own expense.

Party of the first part agrees to receipt party of the second part for all melons delivered, check same into the cars, and deliver duplicate of receipt book and car tallies to party of second part or its representative at the end of each week.

Party of the second part agrees to furnish all crates, nails, and wrappers, and cantaloupe seed, at its own expense, and to label properly all crates with labels to be furnished by party of the first part.

It is further agreed that the party of the second part does hereby appoint the party of the first part as its exclusive agent, to distribute, market, and sell all cantaloupes grown and shipped east by the party of the second part during the season of 1915.

It is further agreed between the parties hereto that all cantaloupes are to be matured properly and well graded, and that the inspector shall have full authority to refuse such cantaloupes as do not come up to these requirements. All cantaloupes are to be delivered in uniformly packed crates as follows:

Standards, 12 x 12 x 23½ inches in size, containing 45 cantaloupes each; jumbo flats, 4½ x 13½ x 23½ inches in size, containing 12 or 15 cantaloupes each; Osage Gems, 4½ x 13½ x 23½ inches in size, containing 12 or 15 cantaloupes each, properly wrapped. First party shall load all cantaloupes accepted by it as being in accordance with this contract, and shall strip the cars and have same billed in the name of .... to first party at such point or points as first party may deem proper, to be marketed. First party agrees to have the same marketed according to its best judgment and ability, and to report to first party's local agent at ..... by wire, separately, for each car, as soon as the same is sold, and said local agent shall at once give second party a check in full for the proceeds of said car, after deducting from the gross amount of sale, all charges for freight, refrigeration, and cartage, and also fifteen per cent upon the gross amount of such sale as first party's commission for its services hereunder; first party shall mail to party of second part duplicate of account sales of each and every car sold by each agent selling the same as soon as rendered by such agent. There shall also be deducted by first party a shed fee of one cent per crate on standard crates and one-third of one cent per crate on flats, to be held by first party and paid to the owners of the respective sheds at the end of the season, for the use of such sheds. There shall also be deducted by first party the sum of two per cent from the gross sales, as made, to create a fund out of which to pay any shortage that may arise during the season, in case any car or cars shall not pay freight, refrigeration, and cartage charges. At the end of the season any balance in such fund shall be paid by first party to second party, to be distributed by it to the growers furnishing such cantaloupes, in their proper proportions.

It is further agreed that the net sums paid to second party by first party from sales shall be distributed by second party to the growers according to their respective shares, and first party shall not be responsible for the making of such distribution by second party.

It is further agreed between the parties hereto that if the transportation company over whose lines said cantaloupes are transported requires a bond for payment of the transportation charges on said cantaloupes to their destination the said party of the first part will furnish satisfactory signers for such bond so required by the transportation company.

All of which is mutually agreed by and between the parties hereto.

In witness whereof the said party of the first part has caused this agreement to be signed on its behalf by its manager and said second party has caused the same to be signed in its name by its president and secretary the day and year first above written.

....
....
....

Ordway Contracts.

In Ordway all contracts were made on the advance-per-crate basis in 1915, the crate material being furnished to the growers by the distributors either at cost or at a small margin above cost. All advances were likewise a guaranty of the season's average net return, but could be discontinued by the distributor at any time upon 24 hours' written notice. The average advance on standard flat or jumbo flat crates of Burrell Gems was 21 cents and the average advance on pony flats was 9 cents. The distributors uniformly received a compensation of 17½ per cent commission, the handling of Burrell Gem melons being said to be somewhat more expensive than the handling of the green-meated varieties.

COOPERATION.

Cooperation in the Colorado muskmelon districts is generally in a more advanced stage than in many of the other melon-producing sections. The growers are organized at practically all of the shipping stations, and contracts are made between associations and distributors rather than between individual growers and distributors. Some progress has been made in the direct purchasing of supplies by associations, and in most cases association officials make a fairly accurate audit and check of distributors' books. The work of the associations might be extended considerably to good advantage.

QUALITY.

Causes of Poor Quality in 1915.

The marketing of the 1915 muskmelon crop from Colorado was unfortunate and unsuccessful. This condition may be attributed almost entirely to the generally very poor quality of the melons shipped. This was due to several causes, including a late spring, which caused replanting and a late crop, and the harvesting of green melons. Other reasons were unseasonably cold and wet weather during the summer, causing slow growth, the presence of some rust, and the scarring of many of the melons by grasshoppers. Although these latter causes contributed to unsatisfactory quality, they were almost

negligible compared to the damage caused by improper picking and packing.

Early market conditions probably were never more indicative of good returns for Colorado melons than they were during 1915. The season opened with the eastern markets almost entirely bare of muskmelons and with the public appetite for western melons whetted by the generally satisfactory quality of those from Turlock. In addition, the weather was abnormally hot and favorable to the consumption of melons in all of the eastern markets in the early part of September. The result was a strong demand for melons seldom equaled at that time of the year. For the first 10 days that Rocky Ford melons were upon the market, September 8 to 18, they sold at as good or better prices than the melons from Turlock, Cal. Normally, this state of affairs should have continued, for the California season was nearing its end and the quality of the melons was deteriorating, while the Colorado melons should have been at their very best.

However, on account of the danger of frost and the eagerness of Colorado growers to take advantage of the prevailing high prices, many of them picked all melons that were even fairly netted, whether they were matured or not. The situation was aggravated by the fact that certain cash buyers paid high prices for the first few cars of melons, although these were green.

After the public had bought Rocky Ford melons for a week with constant disappointment because of poor flavor, prices began to drop, and on September 17 Rocky Ford melons sold in Chicago at 75 cents per crate less than Turlocks, and in New York at $1 to $1.25 less. Up to that date prices for muskmelons from both sections had been identical. Prices of Colorados continued to decline rapidly and on September 23 standard crates sold as low as 50 cents each in Chicago and 75 cents each in New York, these prices being less than the cost of the freight itself. Later they sold even lower, and several instances were reported where entire cars were hauled to the dump and emptied. In some cities cars were condemned by the local health officials as being too green to be fit for food. The market prices of Colorado and Turlock melons in Chicago and New York from September 8 to September 21 are shown in Table 17.

TABLE 17.—*Market prices of Colorado and Turlock muskmelons in Chicago and New York.*

Date.	Chicago.				New York.			
	California.		Colorado.		California.		Colorado.	
	Standards.	Flats.	Standards.	Flats.	Standards.	Flats.	Standards.	Flats.
Sept 8	.....	.....	.....	.....	[1] $3.50	[1]$1.25–1.50		
	$2.00–2.25	.....	.....	$1.00–1.10	2.50–3.00	1.00–1.25		
9	.....	$0.75–0.85	$2.25–2.50	.85–1.00	2.75–3.00	1.00–1.25	.....	$1.25
10	2.00	.80– .85	2.50	[2].35–1.00	3.50	1.50	$3.50	1.25–1.40
11	2.50	.....	2.50	1.00	3.75	1.50	.....	.....
13	2.75–3.00	.....	3.00–3.25	1.25–1.40	[1] 5.00	[1] 2.25	.....	.....
					4.00–4.50			
14	2.75–3.00	.....	3.00	1.50	4.00	1.50–1.75	4.00	1.65–1.75
15	2.75–3.00	1.15–1.25	3.00	1.15–1.25	3.50–4.00	1.50–1.75	3.00–4.00	1.00–1.25
16	3.00–3.25	1.15–1.30	2.75–3.00	1.15–1.25	3.50–4.00	1.75	.....	[3] 1.75
								[4] 1.25–1.50
17	3.00–3.25	1.25–1.40	2.25–2.50	1.00	4.00–4.50	1.75–1.85	2.75–3.00	1.25–1.50
18	3.00–4.00	1.50–1.75	1.00–2.00	1.00	3.00–4.00	1.50–1.75	2.00–2.75	1.00
20	.....	.....	1.50–2.00	.75– .85	2.75–3.25	1.00–1.50	2.00–2.50	.75–1.25
					[1] 4.00	[1]2.00–2.25		
21	3.00–3.25	.....	1.00–1.75	.65– .85	2.75–3.50	1.00–1.50	2.00–2.50	.50– .60
					[1] 4.00	[1] 2.00		
22	2.00–2.25	.....	1.00–1.50	.65– .75	3.00–3.25	1.00–1.25	1.60–2.00	.60– .80
23	3.00–3.25	1.25–1.35	.50–1.25	.50– .75	2.00–2.50	.....	.75–1.25	.65– .75
					[1] 3.25			
24	2.25–2.50	1.25	1.00–1.50	.65– .75	1.75–2.50	1.00–1.15	1.50–2.00	.65– .85
			[1]2.00–2.50	.....	[1]2.50–3.00	[1]1.50–2.00		

[1] Fancy grade. [2] Green. [3] 12's. [4] 15's.

Dealers and consumers interviewed by representatives of the Office of Markets and Rural Organization stationed in the various markets reported that many of these green melons would not ripen, but rotted instead of maturing. Those which did appear to ripen merely became soft, but gained no flavor.

Not all growers shipped immature goods, as a few brands and a few marks were of fairly good quality, and obtained somewhat better prices. But such a large percentage of unsatisfactory stock was shipped that the whole market was injured, and consumption of Colorado melons dropped so low that even the best brands did not bring satisfactory prices. While it is true that prices naturally would have declined somewhat with the colder weather toward the end of the season, the main reason for the generally poor returns was the shipment of green melons.

GRADING, PACKING, AND WRAPPING.

Grading and packing usually are done in sheds in, or close to, the fields, the melons generally being sorted for grade but not for size before going to the packer. The packers size the melons during the packing operation. No wrappers are used on green-meated melons, but all pink-meated ones are wrapped.

Inspection.

Because of the small and scattered acreages, it is not practicable for the distributors to establish a field inspection service. Platform inspectors usually visit various fields for a short time each morning, but they are able at the most merely to give advice with reference to general conditions. The growers and distributors therefore depend largely upon platform inspection, which never can be entirely efficient without the hearty cooperation of the grower.

DISTRIBUTION.

While fairly good distribution of Colorado melons was secured in 1915, it had little effect on prices for reasons already explained. Table E (in envelope at end of bulletin) lists receipts of cars in various markets and the average prices actually secured in these markets in 1915. It is valuable only as an example of the impossibility of securing good results by efficient distribution when other factors necessary to success are lacking. No conclusions can be drawn from this table with reference to the consuming capacity or market preferences of any city.

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CHARTS SHOWING DISTRIBUTION OF WESTERN MUSKMELONS IN 1915

1—A. Daily receipts of muskmelons from the Imperial Valley, Cal., in all markets, with net returns to the growers.

2—B. Daily receipts of muskmelons from the Salt River Valley, Ariz., in all markets, with net returns to the growers.

3—C. Daily shipments of muskmelons from Moapa, Nev., to all markets, with net returns to the growers.

4—D. Daily receipts of muskmelons from Turlock, Cal., in all markets, with net returns to the growers.

5—E. Daily receipts of muskmelons from Colorado in all markets, with net returns to the growers.

52335°—Bull. 401—16

TABLE NO. 2. - DAILY RECEIPTS OF WATERMELONS FROM THE IMPERIAL VALLEY, CAL., IN ALL MARKETS, WITH NET RETURNS TO GROWERS.

MAY

JUNE

Market	May 25	May 26	May 27	May 28	May 29	May 30	May 31	June 1	June 2	June 3	June 4	June 5	June 6	June 7	June 8	June 9	June 10	June 11	June 12	June 13	June 14	June 15	June 16	June 17	June 18	June 19	June 20	June 21	June 22	June 23	June 24	June 25	June 26	June 27	June 28	June 29	June 30	Total Cars: 1931 entire
Akron, O.																																						
Albany, N. Y.																																						
Albuquerque, N. M.																																						
Altoona, Pa.																																						
Argentine, Kan.																																						
Bakersfield, Cal.																																						
Baltimore, Md.																																						
Bay City, Mich.																																						
Bellingham, Wash.																																						
Binghamton, N. Y.																																						
Birmingham, Ala.																																						
Bloomington, Ill.																																						
Boise, Idaho																																						
Boston, Mass.																																						
Bridgeport, Conn.																																						
Brockton, Mass.																																						
Buffalo, N. Y.																																						
Burlington, Vt.																																						
Burr Oak, Ill.																																						
Butte, Mont.																																						
Calgary, Alberta, Can.																																						
Camden, N. J.																																						
Cedar Rapids, Ia.																																						
Charleston, W. Va.																																						
Chicago, Ill.																																						
Cincinnati, O.																																						
Clarksburg, W. Va.																																						
Cleveland, O.																																						
Coffeyville, Kans.																																						
Colorado Springs, Colo.																																						
Columbia, S. C.																																						
Columbus, O.																																						
Council Bluffs, Ia.																																						
Dallas, Tex.																																						
Denver, Colo.																																						
Des Moines, Ia.																																						
Detroit, Mich.																																						
Dodge City, Kans.																																						
Duluth, Minn.																																						
Durango, Colo.																																						
Edwards, Miss.																																						
El Paso, Tex.																																						
Elgin, Ill.																																						
Eugene, Ore.																																						
Evansville, Ind.																																						
Everett, Wash.																																						
Fort Dodge, Ia.																																						
Fort Worth, Tex.																																						
Fremont, Neb.																																						
Fresno, Cal.																																						
Gallup, N. Mex.																																						
Grand Island, Neb.																																						
Grand Rapids, Mich.																																						
Hartford, Conn.																																						
Hays, Kans.																																						
Helena, Mont.																																						
Hot Springs, Ark.																																						
Houston, Tex.																																						
Independence, Kans.																																						
Indianapolis, Ind.																																						
Jamestown, N. Y.																																						
Joplin, Mo.																																						
Kansas City, Mo.																																						
Kansas City, Kans.																																						
Lafayette, Ind.																																						
Lansing, Mich.																																						
Lima, Ohio																																						
Lincoln, Neb.																																						
Little Rock, Ark.																																						
Long Beach, Cal.																																						
Los Angeles, Cal.																																						
Louisville, Ky.																																						
Lowell, Mass.																																						
McKeesport, Pa.																																						
Memphis, Tenn.																																						
Milwaukee, Wis.																																						
Minneapolis, Minn.																																						
Minot, N. Dak.																																						
Missoula, Mont.																																						
Monroe, La.																																						
Montreal, Que.																																						
Muskogee, Okla.																																						
Newark, N. J.																																						
New Castle, Pa.																																						
New Orleans, La.																																						
New York, N. Y.																																						
North Adams, Mass.																																						
Oakland, Cal.																																						
Oklahoma City, Okla.																																						
Omaha, Neb.																																						
Orleans, Ind.																																						
Paducah, Ky.																																						
Palmetto, Fla.																																						
Peoria, Ill.																																						
Philadelphia, Pa.																																						
Phoenix, Ariz.																																						
Pittsburgh, Pa.																																						
Pittsburgh, Penn.																																						
Portland, Maine																																						
Portland, Ore.																																						
Providence, R. I.																																						
Pueblo, Colo.																																						
Racine, Wis.																																						
Red Cloud, Neb.																																						
Rockford, Ill.																																						
Sacramento, Cal.																																						
St. Joseph, Mo.																																						
St. Louis, Mo.																																						
St. Paul, Minn.																																						
Salt Lake City, Utah																																						
San Antonio, Tex.																																						
San Francisco, Cal.																																						
Santa Ana, Cal.																																						
Santa Fe, N. Mex.																																						
Seattle, Wash.																																						
Shamokin, Pa.																																						
Sioux City, Ia.																																						
Sioux Falls, S. Dak.																																						
Springfield, Ill.																																						
Springfield, Mass.																																						
Springfield, Mo.																																						
Springfield, O.																																						
Stockton, Cal.																																						
Syracuse, N. Y.																																						
Tacoma, Wash.																																						
Tampa, Fla.																																						
Terre Haute, Ind.																																						
Texarkana, Ark.																																						
Toledo, O.																																						
Topeka, Kans.																																						
Troy, N. Y.																																						
Tulsa, Okla.																																						
Union, N. J.																																						
Utica, N. Y.																																						
Vancouver, B. C.																																						
Waterloo, Ia.																																						
Wausau, Wis.																																						
Wenatchee, Wash.																																						
Wichita, Kans.																																						
Williamsport, Pa.																																						
Winona, Minn.																																						
Worcester, Mass.																																						
Yakima, Wash.																																						
Yuma, Ariz.																																						
Zanesville, O.																																						

Office of Markets and Rural Organization, U. S. Department of Agriculture, Pulaski Fla. 4/6.

RECAPITULATION OF FOOTNOTE CODES

a - Ability to absorb full rate asked(s).
b - Ability to absorb part of rate asked(s).
c - Entering Point only - rate finally adjusted elsewhere.
d - Diverted.
e - Sales.
f - Fancy.
g - Reports received by growers.
h - Small receipts in carlots.
i - Unsatisfactory.
j - The below edge denotes loss to growers.

TABLE 8. DAILY RECEIPTS OF MUSKMELONS FROM THE SALT RIVER VALLEY, ARIZONA, IN ALL MARKETS, WITH NET RETURNS TO GROWERS.

		JULY 11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AUGUST 1	2	3	4	5	6	7	8	9
Akron, O.	Green																														
	Pink																														
Albuquerque, N.M.	Green																														
	Pink																														
Altoona, Pa.	Green																														
	Pink																														
Boston, Mass.	Green																														
	Pink																														
Buffalo, N.Y.	Green																														
	Pink																														
Canton, O.	Green																														
	Pink																														
Chambersburg, Pa.	Green																														
	Pink																														
Charleroi, Pa.	Green																														
	Pink																														
Chicago, Ill.	Green																														
	Pink																														
Cincinnati, O.	Green																														
	Pink																														
Cleveland, O.	Green																														
	Pink																														
Denver, Colo.	Green																														
	Pink																														
Des Moines, Ia.	Green																														
	Pink																														
Detroit, Mich	Green																														
	Pink																														
Elmira, N.Y.	Green																														
	Pink																														
El Paso, Tex.	Green																														
	Pink																														
Gallup, N.M.	Green																														
	Pink																														
Grand Island, Neb.	Green																														
	Pink																														
Harrisburg, Pa.	Green																														
	Pink																														
Indianapolis, Ind.	Green																														
	Pink																														
Kansas City, Mo.	Green																														
	Pink																														
Lincoln, Neb.	Green																														
	Pink																														
Milwaukee, Wis.	Green																														
	Pink																														
Minneapolis, Minn.	Green																														
	Pink																														
New Orleans, La.	Green																														
	Pink																														
New York, N.Y.	Green																														
	Pink																														
Omaha, Neb.	Green																														
	Pink																														
Peoria, Ill.	Green																														
	Pink																														
Philadelphia, Pa.	Green																														
	Pink																														
Pittsburgh, Pa.	Green																														
	Pink																														
Pittsfield, Mass.	Green																														
	Pink																														
Pueblo, Colo.	Green																														
	Pink																														
Portland, Ore.	Green																														
	Pink																														
St. Joseph, Mo.	Green																														
	Pink																														
St. Louis, Mo.	Green																														
	Pink																														
Seattle, Wash.	Green																														
	Pink																														
Springfield, Mass.	Green																														
	Pink																														
Syracuse, N.Y.	Green																														
	Pink																														
Toledo, O.	Green																														
	Pink																														
Topeka, Kans.	Green																														
	Pink																														
Utica, N.Y.	Green																														
	Pink																														
Washington, D.C.	Green																														
	Pink																														
Wichita, Kans.	Green																														
	Pink																														
Worcester, Mass.	Green																														
	Pink																														

(a) Containers used for "green meats."
(b) " " " "pink meats."

Explanation of Symbols Used.

F - Price to growers for flats
J - " " " " jumbos
P - " " " " pooles
R - Daily receipts in carlots
S - Price to growers for standards
2/3 - Price to growers for "two-thirds."
- Minus sign shows loss to growers.

TABLE C. — DAILY SHIPMENTS OF MUSKMELONS FROM MOAPA, NEVADA, TO ALL MARKETS, WITH NET RETURNS TO THE GROWER.

		JULY 6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	AUGUST 1	2	3	4	5	TOTAL RECEIPTS
Billings, Mont.	S									1: 1.11		1: 1.00				1: .97								1: .68									5
	P									.71		.60				.57								.28									
Boston, Mass.	S																			1: 1.46	1: 1.48												2
	P																			1.06	1.08												
Butte, Mont.	S					1 .97				1: 1.20		1: 1.21		1: 1.21	1: 1.12	1: 1.13		1: .99	1: .92			1: .34	1: .46		1: .25	1:							12
	P					.57				.80		.81		.81	.72	.73		.59	.52			-.06	.06		-.15								
Cedar Rapids, Ia.	S																						1: 1.09	1: .13									2
	P																						.69	-.27									
Cheyenne, Wyo.	S								1: 1.06				1 .83									1: .70											3
	P								.66				.43									.30											
Chicago, Ill.	S													2: .98		2: 1.09		1: 1.07	2: 1.10	2: 1.19	2: 1.18		1: .96		5: .42		1: .45						18
	P													.58		.69		.67	.70	.79	.78		.56		.02		.05						
Cincinnati, O.	S												1 1.00	1: .96	1: .96		1: .72	1: .80	1: .60		1: .84												6
	P												.60	.56	.56		.32	.40	.20		.84												
Cleveland , O.	S												1 1.39			1: 1.26		1: 1.14			1: 1.07	1: .86		2: .51								7
	P												.99			.86		.74			.67	.46		.13								
Colorado Springs, Colo.	S														1:		1:			1			1			1		1: 1.00					6
	P																											.60					
Creston, Ia.	S																	1.00				1: .98											1
	P																	.60				.58											
Davenport, Ia.	S																										1: .25						1
	P																										-.15						
Denver, Colo.	S						1: 1.65				1 .63			1:	1: .78		2: .58					1: .65							1: .69				8
	P						1.25				.23				.38		.18					.25							.29				
Des Moines, Ia.	S														1: 1.08	1: 1.14				1: 1.12		2: 1.06		2: .64		1: .86				1: .32	1			10
	P														.68	.74				.72		.66		.24		.46				-.08			
Detroit, Mich.	S															1: 1.05		1: 1.01	1:		1: .99			1: .72	2: .54								7
	P															.65		.61			.59			.32	.14								
Duluth, Minn.	S												1: .92				1: .83			1: .74			1 .46										4
	P												.52				.43			.34			.06										
Fargo, N.Dak.	S											1: 1.23					1.26					1: 1.11								1: .96			3
	P											.83					.86					.71								.56			
Great Falls, Mont.	S				1 1.10						1 1.09				1: 1.14			1: .86						1: .94	1: .76							6
	P				.70						.69				.74			.46						.54	.36								
Helena, Mont.	S					1: 1.21						1: 1.15									1: .70						1: .72						4
	P					.81						.75									.30						.32						
Hutchinson, Kans.	S														1: .76						1: .79												2
	P														.36						.39												
Idaho Falls, Idaho.	S												1 1.16																				1
	P												.76																				
Indianapolis, Ind.	S															1																	1
	P																																
Kansas City, Mo.	S											.62	2 .74		1: .73	1: .83	2: .91	1: .64	2: .72	2: .84		2: .35	4: .29			1: .22	1: -.09							19
	P											.22	.34		.33	.43	.51	.24	.32	.44		-.05	-.11			-.18	-.49						
Lincoln, Nebr.	S				1 .96					1 .59		1: 1.14	1 .94		1: .39		1: 1.05	1: .96	1: .84				1: .40	1		1: .87			1: .69				12
	P				.56					.19		.74	.54		-.01		.65	.56	.44				.00			.47			.29				
Milwaukee, Wis.	S												1 .96	1: .81			1: .92		.66														3
	P												.56	.41			.52		.26														
Minneapolis, Minn.	S												1 1.30	1: 1.29	1: 1.22	1:	2: 1.31	1:	1: 1.14	1: 1.29	2: 1.31	2: 1.13	3: 1.19	1: .32		1: .42	1:	1:	1:					21
	P												.90	.89	.82		.91		.74	.89	.91	.73	.79	-.08		.02			.20				
Missoula, Mont.	S											1:					1: 1.03																2
	P																.63																
Muscatine, Ia.	S																								1								1
	P																																
Ogden, Utah.	S					1 1.43								1: .90	1: 1.29						1: 1.22												5
	P					1.03								.90	.89						.82												
Omaha, Nebr.	S						1 1.09			1: 1.12	1: 1.16	1:	1: 1.10	1: 1.14	1: 1.09	2: 1.08	1: .92	1: .62	1: .58	1: .58	2:	1: .82	1: .55	1: .54			1: .79		1: .49					20
	P						.69			.72	.76		.70	.74	.69	.68	.52	.22	.18	.18		.42	.15	.14			.39		.09				
Peoria, Ill.	S																		1: .92		1: .83												2
	P																		.52		.43												
Pittsburgh, Pa.	S								1 1.08		1: 1.15	2: 1.16	2: 1.18	2: 1.01	1: 1.00	2: .93	2: .94	2: .81	3: 1.01	2: .97	2: .84												22
	P								.68		.75	.76	.78	.61	.60	.53	.54	.41	.61	.57	.44												
Pueblo, Colo.	S													1: .55													1: .76						2
	P													.15													.36						
St. Paul, Minn.	S																				1:						1						2
	P																																
Salt Lake City, Utah.	S	1.44:	1: 1.48:	1: 1.29:		1: 1.05		1 .97	1:		2: 1.16		1: 1.13		2: 1.08	1: 1.14	2: 1.12	3:		1: 1.05	1: 1.08	1:	1:	1: .96	1: .78	1		3: .80		1: .89	1	2		29
	P	1.04	1.08	.89		.65		.57			.76		.73		.68	.74	.72			.65	.68			.56	38			.40		.49				
Sioux City, Ia.	S						1: 1.28				1: 1.12				1: 1.26	1:		1: 1.11		1: 1.18				1: 1.18			1: 1.14			1: 1.06		9
	P						.88				.72				.86			.71		.78				.78			.74			.66			
Springfield, Ill.	S																								.06								
	P																								-.34								
Toledo, Ohio.	S													1: 1.18			1: 1.15				1: 1.27				1: 1.16								4
	P													.78			.75				.87				.76								
Topeka, Kans.	S													1: .74																			1
	P													.34																			
Wichita, Kans.	S												1: .80			1: .78		1: .81			1: .70												4
	P												.40			.38		.41			.30												
TOTALS		0	1	2	2	3	3	1	4	4	7	9	15	13	16	17	18	17	15	14	19	15	15	13	12	6	12	2	5	4	3	0	267

Explanation of symbols used:

C - Daily shipments from stations in carlots
P - (at left) pony crates
Pr - Price received by growers
S - (at left) standard crates
- - Minus sign shows loss to growers

0		21
Pr.	R.	Pr
		4

TABLE II. DAILY RECEIPTS OF WATERMELONS FROM TURLOCK, CALIFORNIA, IN ALL MARKETS, WITH NET RETURNS TO THE GROWERS

	JULY 25	26	27	28	29	30	31	AUGUST 1	2	3	4	5	6	7	8	9	10	11	12	13	14	AUGUST 15	16	17	18	19	20	21	22	23	24	25	26	27	28	AUGUST 29	30	31	SEPTEMBER 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	SEPTEMBER 23	24	25	26	27	28	29	30	1	2	3	4	5	6	OCTOBER 7	8	9	TOTAL RECEIPTS
	R Pr.	R Pr.	R Pr.

TABLE V. DAILY RECEIPTS OF MUSKMELONS FROM COLORADO IN ALL MARKETS, WITH NET RETURNS TO THE GROWERS

Explanation of Symbols Used:

S - Standards
F - Flats
J - Jumbos

C - Crate meets
FF - Fish meets (all flats)
R - Receipts in carlots
- - Minus sign shows loss to growers

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